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AFSWP—Service Representative

in the Atomic Weapons Field . . . see p. 5

Complete Contents p. 3

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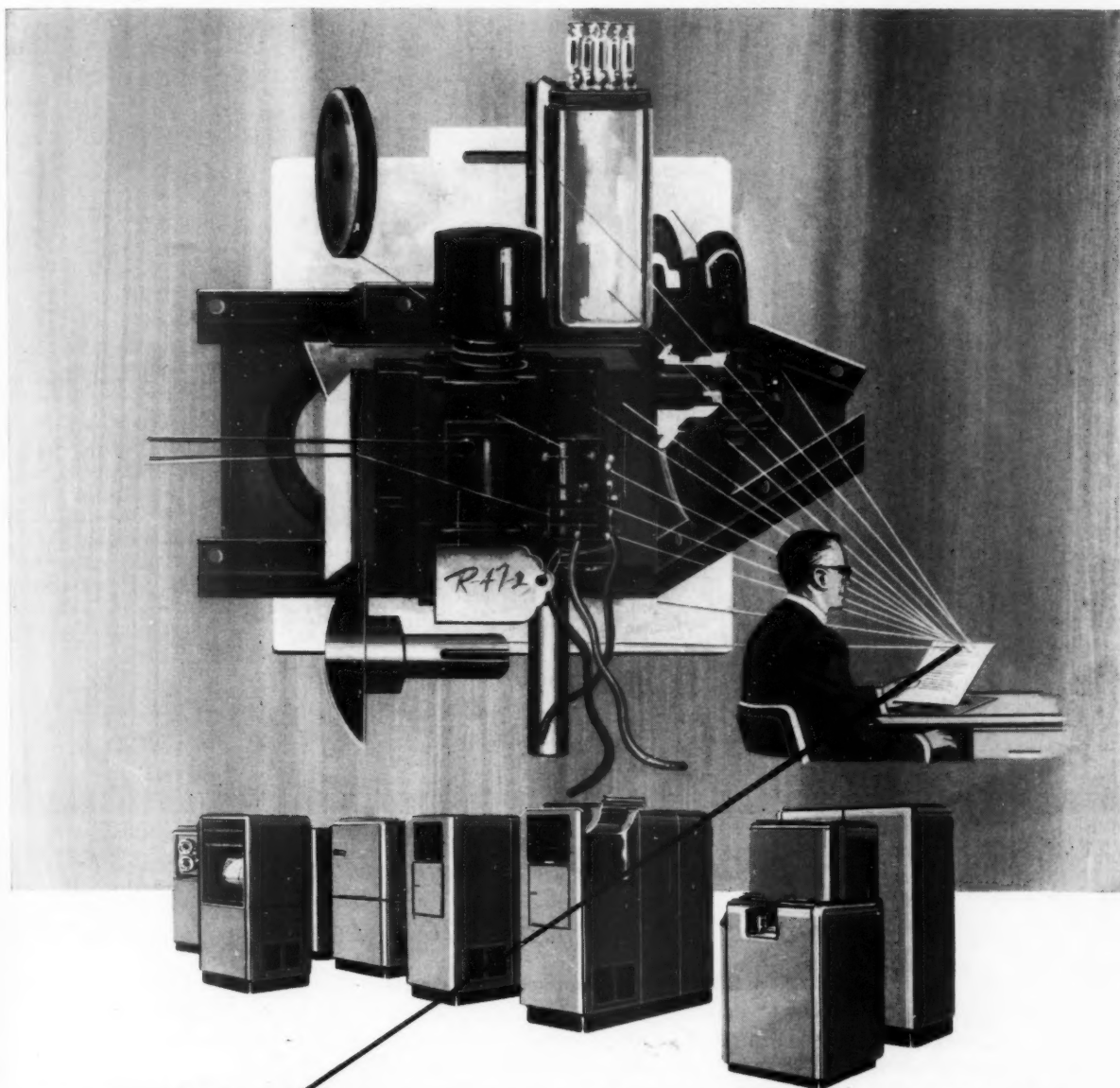
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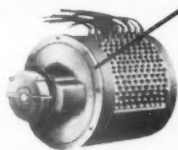
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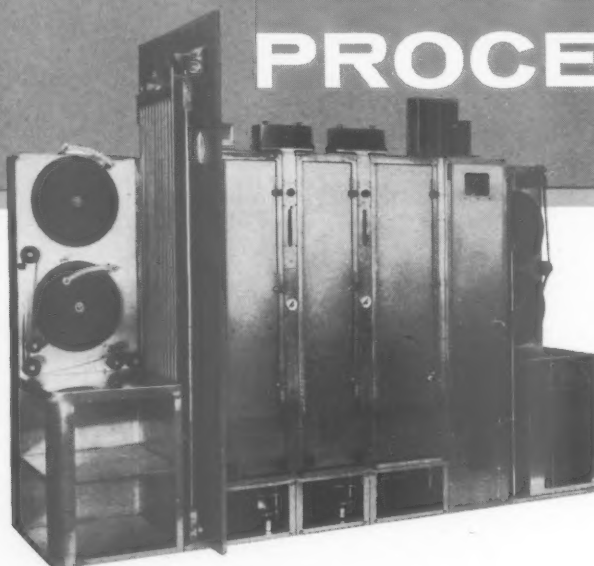
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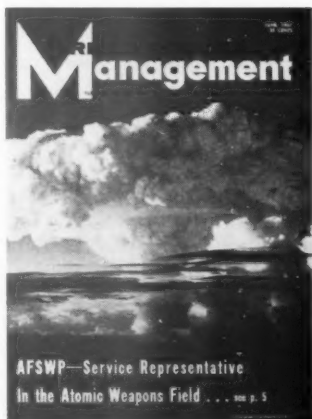
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ON THE COVER:

This month's cover carries one of the latest official photos of a nuclear explosion, so recent that all information on it is still classified. For information on an organization which has much to do with this and other types of nuclear weapons see General Leudecke's story on page five.

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Featured This Month



General Alvin Luedecke, USAF

Alvin Roubal Luedecke was born at El Dorado, Texas, October 10, 1910. He was graduated from the Agricultural and Mechanical College of Texas in 1932, with a Bachelor of Science degree in Chemical Engineering and commissioned in the Officers' Reserve Corps as a second lieutenant of Field Artillery on May 28, 1932.

In 1944, he was made Deputy Chief of Air Staff of the Army Air Forces in the India-Burma theater. He became Assistant Chief of Air Staff for Plans, Operations, Training, and Intelligence in the China theater in 1945.

General Luedecke, in March, 1946, was assigned to the office of the Assistant Chief of Air Staff-5 at AAF headquarters and appointed Senior AAF Member of the Joint War Plans Committee of the JCS. On October 10, 1947, he was assigned to the Office of the Director of Plans and Operations at USAF Headquarters, with duty as the USAF member of the Joint War Plans Committee. Later that month he was transferred to the office of the Joint Chiefs of Staff for duty as a member of the Joint Strategic Plans Group.

In June, 1949, General Luedecke was appointed executive secretary of the Military Liaison Committee to the Atomic Energy Commission of the Central Control Group, Office of the Secretary of Defense. In February 1951, he assumed additional duty as deputy to the chief of the Armed Forces Special Weapons Project. In June, 1953, General Luedecke became Chief of AFSWP.

Maj. Gen. Harry Crandall

Harry Wells Crandall was born in Annapolis, Maryland, August 26, 1898. He enlisted in the US Navy in April 1917 and was discharged to enter the US Naval Academy in June 1918. In March 1919, he resigned from the Naval Academy and entered the US Military Academy in July 1921. On June 12, 1925, he was graduated from the Military Academy and commissioned a second lieutenant in the Infantry.

In January 1940, he attended the Army Finance School. After graduation he was named Assistant Division Finance Officer (6th Division) from May to July 1940, and



Division Finance Officer from August 1940 to December 1942.

From August 1945 to May 1947, he was Assistant to Chief, Budget and Fiscal Section, AGF, Washington, D. C., and Fort Monroe, Virginia. From May to November 1947, he was Ground Budget and Fiscal Officer, AGF, Fort Monroe, Virginia. He was transferred to the Finance Corps in 1947.

He next served at the US Military Academy as Fiscal Officer until his transfer in July 1950 to Fort Shafter, Hawaii, as Fiscal Officer there.

In August 1953, he was appointed Treasurer of the US Military Academy, where he served until his appointment as The Assistant Army Chief of Finance in November 1954. In May 1956, he was named Army Chief of Finance.

Admiral J. Wright

The Admiral was born into a military family. His father, William Mason Wright, was a general in the Army. However, he entered the Naval Academy.

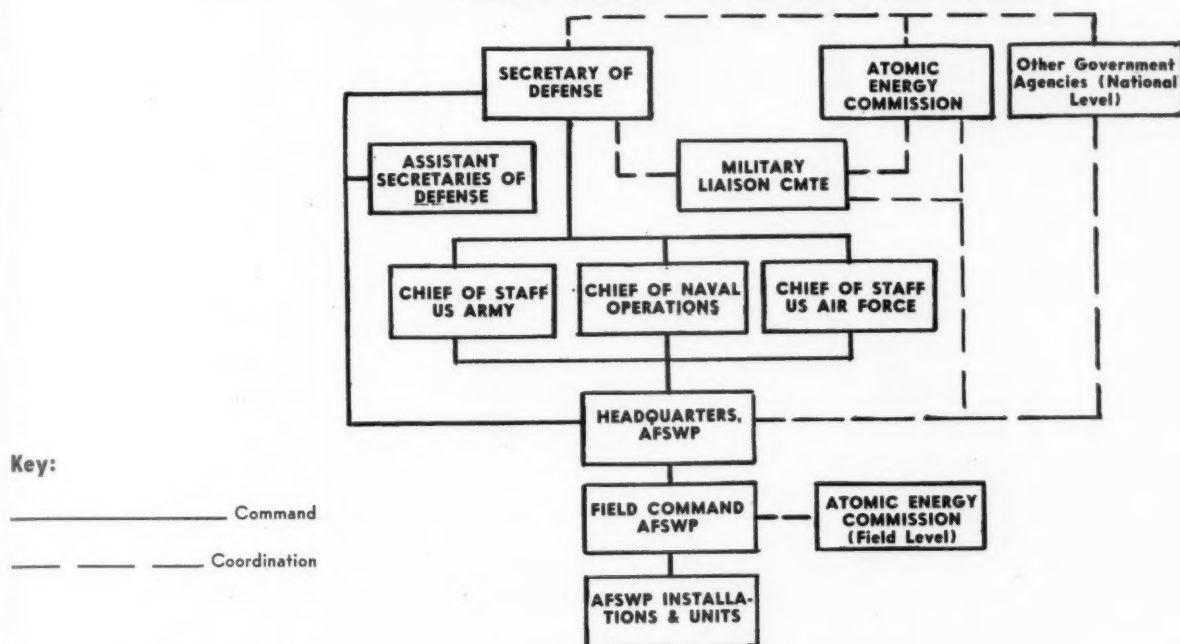
Admiral Wright was closely associated with the formulation of U.S. and Allied World War II plans, in both the Atlantic and Pacific. As a member of General Eisenhower's Allied Expeditionary Force Staff, he helped plan Operation TORCH, the joint landing of Allied Forces in North Africa. Two weeks before the invasion, the Admiral was one of a group of officers who, with General Mark Clark, secretly went ashore from a submarine off Cherchel, North Africa, to make contact with underground French Forces. He made a second secret entry into enemy-held territory aboard an English submarine when he was charged with the evacuation of General Giraud and a group of French staff officers isolated in a village in Southern France.

In the 44 years of his naval service, Admiral Wright has witnessed all aspects of the tremendous scientific revolution that has given us the modern Navy. Though the prime mission of the Navy, that of controlling the seas, has not changed, the method of achieving it has. The Navy's creed states that "mobility, surprise, dispersal, and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection of our heritage from the past. Never have our opportunities and responsibilities been greater."



ARMED FORCES MANAGEMENT

Where AFSWP Fits in the Defense Picture



AFSWP—Service Representative In the Atomic Weapons Field

THE ARMED Forces Special Weapons Project (AFSWP) is responsible for furnishing support to the Army, Navy, and Air Force in the field of atomic weapons by providing logistic, training and technical services.

It is a tri-Service organization, and is unique from the management point of view in that it derives authority from multiple sources which are co-equal and with which it has common interest in the field of the application of atomic energy. These sources are the Chiefs of the Services and the Secretary of Defense; and the Chief, AFSWP, whose office is in Washington, is responsible to each of them, individually, as well as in certain specified instances to certain of the Assistant Secretaries of Defense.

The AFSWP acts as a centralized control for decentralized operations

of the military in the field of atomic weapons. Just how AFSWP fits into this picture is better illustrated by the chart showing the command and the coordination lines through which the Project operates. (see above)

It is notable, however, that multiple source of authority applies to the headquarters level of AFSWP. At the Field Command, AFSWP, located at Sandia Base, New Mexico, which is the operational level, and at the installations and bases under the Commander, Field Command, the normal centralization of authority exists. At these levels authority is derived from the senior and further delegated in the normal military command chain. AFSWP, in being first a tri-Service organization, and second, a Service for the Services, is faced with unique problems of organization and procedure. It must

follow the regulations and directives of the various Armed Forces where they apply, and develop its own procedures when necessary which must not be in conflict with Service Directives.

The multiple source of authority at the headquarters level no doubt contributes in some considerable measure to the success of AFSWP in performing its mission, since the policies by which it is guided are predicated upon co-equal interest of each of the Services.

What AFSWP Does

In general, these policies require that AFSWP staff responsibilities in the atomic energy field will be exercised in coordination with staff divisions and agencies of the Armed Forces responsible for allied activities. They provide that AFSWP will utilize established agencies of

Why This Story Is Important to You

"This article gives a comprehensive survey of an area which is increasingly important to all members of the Armed Forces"—The Department of Defense.

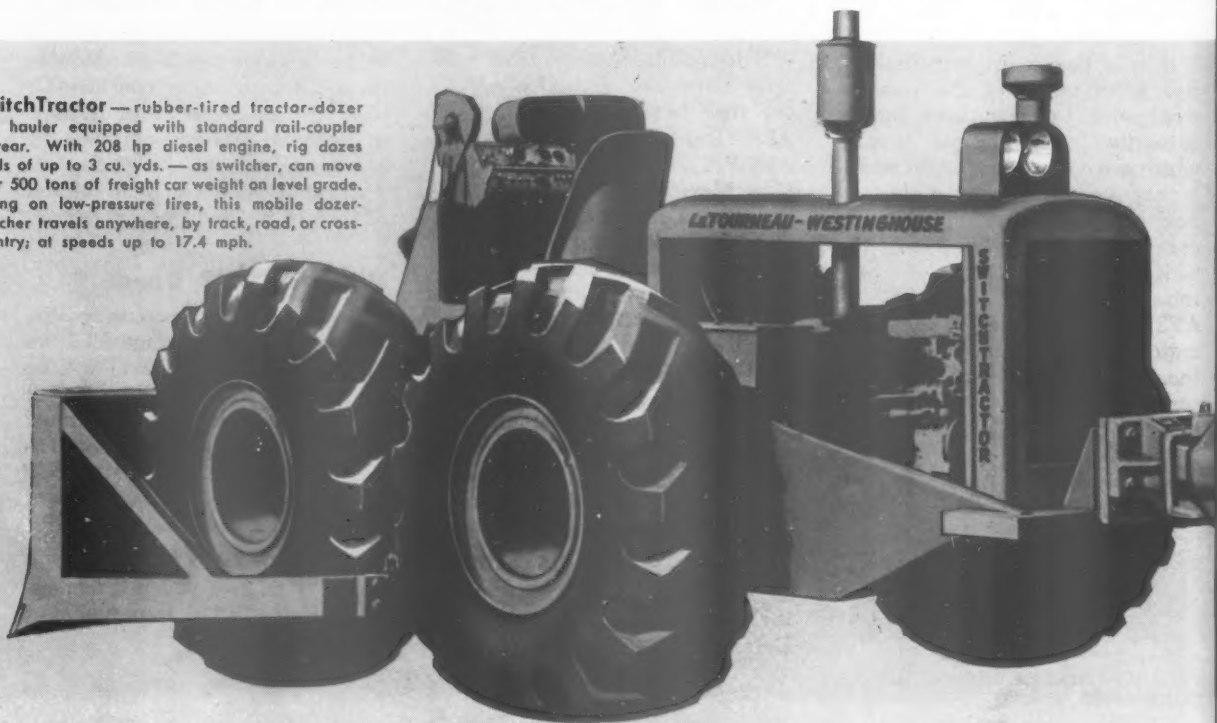
By Major General
Alvin Luedecke

SwitchMobile — a go-anywhere rubber-tired locomotive, with front and rear car-couplers, air compressors, and standard connections for air brakes. It has 208 hp diesel, weighs 35,640 lbs., straddles rails and pulls on tie-ends with 5½' high by 2' wide tires. Rimpull rating is 36,000 lbs. Can start 1,250 tons of freight rolling. Top speed, forward or reverse, is 16 mph.



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the Armed Forces to carry out programs where suitable facilities already exist. They also provide that AFSWP will serve as representatives of the Armed Forces in dealing with non-military agencies in matters under its cognizance in the atomic energy field. Finally, AFSWP is given command over all National Stockpile Sites, and other military units as may be assigned. General support then, on the part of each of the Services, permits AFSWP to render its support in the field of atomic weapons efficiently and economically.

Provides Logistic Services

In accomplishing its responsibilities in logistics, AFSWP insures efficient logistics planning and programming of special weapons material and equipment, consolidates requirements of the Armed Forces, and assists in the performance of inspection and modification. AFSWP also renders support on the operational level by publishing supply regulations governing accountability and handling of special weapons material and equipment to supplement existing supply regulations, and prepares special weapons equipment lists and training allowances, procures and distributes initial and resupply of material and equipment as arranged between AFSWP and the individual Service, and operates specialized facilities for calibration, repair and maintenance of special weapons equipment. Through these logistic support activities, AFSWP contributes to uniformity of operational policies and procedures in the field.

To this point we have seen the types of logistic support which AFSWP provides to the Services. It accomplishes this support through direct coordination between AFSWP and the Services, determining needs, and altering procedures where necessary to fill Service requirements. It is particularly noted that logistic support for AFSWP is provided by the Services. In consonance with the principle that AFSWP will utilize established agencies of the Armed Forces where suitable facilities exist, AFSWP operates under what it terms the "Satellite" concept of support through major Service in-

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Who AFSWP Serves



installations in the immediate proximity of AFSWP activities wherever possible. This "Satellite" concept is implemented through support agreements entered into with the Service installations. Service supply facilities are used to the maximum degree as sources of general supplies and equipment. Additional support is rendered by the Corps of Engineers and the Bureau of Yards and Docks in certain types of construction, by the Corps of Engineers in procuring heavy engineering equipment, by the Quartermaster Corps in procuring material handling equipment, and by the Chief of Ordnance in the procurement of standard vehicular equipment.

Although AFSWP receives support from the Services, the Chief of AFSWP justifies his own budget before the Bureau of the Budget and Congress and provides payment and management of funds through his own facilities. This permits AFSWP to identify its own specific costs and further permits review of budgeting, and finance at the highest government levels without concern over the possibility that some of the costs of operation may be absorbed in one or another Service budget. In general, Army methods and procedures for budgeting and fiscal are employed at the headquarters and Field Command levels of the AFSWP. The Commander, Field Command, submits operational budgeting requirements for his main and subordinate activities to the Headquarters, AFSWP, where they are incorporated with the requirements of the headquarters. The final funds allowed are carried as a vehicle by the overall Army budget and are allocated to AFSWP in a one line entry. Funds for the operational support of the Field Command and subordinate activities are allocated by Headquarters, AFSWP.

Since AFSWP uses existing facilities of the Services whenever possible, certain of the operational funds allowed Commander, Field Command, are in turn allotted to Service commands for the support of AFSWP activities at their facilities. In these particular instances, the funds are drawn upon by the AFSWP activity, but accounted for to Commander, Field Command, by the Service command. Head-

quarters, AFSWP submits fiscal reports to the Army Comptroller, and in order to insure that each dollar spent buys a dollar's worth, a continuous analysis of fund utilization is conducted.

An example of a more comprehensive type of analysis is the January mid-year review of current funding programs. The purpose of this review is to study fund utilization to determine the necessity for fund adjustments and reprogramming actions and serves as a means of effecting redistribution of funds for more efficient usage. It is accomplished by reviewing reports, and by personal discussions with representatives of each installation or activity of the current programs. Field Command operates under the Comptroller concept, and the Comptroller, Field Command, collates the information and submits it to the Commander, Field Command, for review and analysis. The information then, together with the recommendations of the Commander, is personally presented by the Commander's representatives to the Chief, AFSWP, or to personnel selected to act in behalf of the Chief. An additional analysis is then conducted by the headquarters' staff prior to acting upon the funding requirements remaining for the latter half of the fiscal year.

Provides Training

AFSWP was activated in 1947, along with the AEC, as a result of the dissolution of the Manhattan Engineer District. At that time, AFSWP contained the only group of military personnel trained in the atomic weapons field, and Service personnel were sent to AFSWP to receive technical training in the assembly, handling, storage, surveillance, maintenance, salvage, and disposal of atomic weapons. The Services have since developed additional training programs of their own to meet increased requirements, and AFSWP has rendered continued assistance by preparing training programs for their use, by assisting the Service schools in preparation of instructional material, and by continuing individual and group training of Service personnel to supplement Service training programs.

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Within AFSWP, training and assistance responsibilities in the atomic weapons field are delegated to the Commander, Field Command, and are actually accomplished at Sandia Base under the direction of the Sepecial Weapons Training Group. Here, the most current information is utilized to insure that the individual to be trained develops a high degree of technical proficiency, key officers of the Services are orientated in military application of atomic energy, and designated officers of the three Services are indoctrinated in the characteristics and effects of atomic weapons and in technical considerations essential to atomic weapons employment.

Provides Technical Services

The AFSWP is most fortunate in that it is staffed by its parent Armed Forces with highly talented technical and administrative personnel. From its military and civilian personnel, and from various consultants and panels, the AFSWP obtains the benefits of some of the best minds to assist in carrying out its mission. It is on these individuals, these consultants and panels, and on its liaison with the DOD, the Armed Forces, the AEC, and other committees and agencies that the AFSWP relies to insure that no gaps exist in our knowledge in the field of atomic weapons. Through technical services, AFSWP insures that this fund of knowledge is passed on to the Armed Forces.

One of the more interesting types of technical service which AFSWP provides is in connection with field tests of atomic weapons or devices. AFSWP prepares preliminary plans and budget estimates for military phases of atomic weapons tests, and coordinates and integrates Army, Navy, and Air Force requirements for data obtainable through field tests. AFSWP is responsible for evaluating weapons effects data, and disseminates these evaluations to the Services and to other governmental agencies which have a need for this type of information. In addition, AFSWP, provides technical assistance to Commanders of Task Forces concerned with atomic weapons tests, and conducts a continuous review and

analysis of results of tests from the scientific and phenomenological viewpoint.

Other types of technical support which AFSWP renders are perhaps connected with less dramatic aspects of the atomic weapons program, but they are no less significant for they form what may be considered the basis for the day-by-day "routine" in this field. These other technical services are involved in the AFSWP responsibilities for determining qualification, maintenance, proficiency, safety standards and physical procedures for all personnel and equipment involved in activities connected with the handling, transportation, inspection, testing, and storage of atomic weapons and their components. AFSWP furnishes information on these matters to responsible Commanders and makes recommendations to the Services concerning the composition of atomic weapons assembly organizations, and from time to time determines the status of technical proficiency of these organizations. Not to be overlooked is the part AFSWP plays in furthering the development of defensive measures against atomic weapons. In this, AFSWP coordinates military research and development in the fields of radiac instruments, protective devices, decontamination, and medical aspects of atomic warfare.

In technical services, as with logistic and training services, it may be generally stated that Headquarters, AFSWP, maintains liaison and coordination with the Services, Service R & D Offices, the DOD, the AEC, and other committees and governmental agencies, determining requirements and providing guidance and advice in the atomic weapons field. The Commander, Field Command, is primarily responsible for the monumental task of implementing these services, guided by the policy and direction furnished by the Headquarters, AFSWP.

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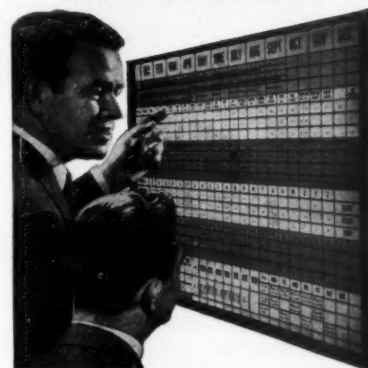
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New Methods: Why Today's Officer Must Know Financial Management

In all its interesting history, the Army Finance Corps has never faced a more challenging period than the present one. This is because of the significant changes that have been and are taking place in Army management, and more particularly in Army financial management. Here's why they are taking place and what you should know about them . . .

THESE CHANGES stem quite directly and obviously from the financial provisions of the National Security Act Amendments of 1949 (PL 216-81st Cong.) (Act of Aug. 10 1949), as reinforced and accelerated by the Accounting and Auditing Act of 1950 (Act of Sept. 12, 1950). The 1949 Act provided for a comptroller in the Office of the Secretary of Defense, and in each of the three military departments, with responsibility for budgeting, accounting, disbursing, internal auditing, and progress and statistical reporting. It also provided that budgets in the military departments be on a cost of performance basis, directed that financial property accounting be utilized, and authorized the establishment of stock, industrial, management funds.

The Comptroller of the Army has borne the brunt of the burden of initiating the changes to carry out the intent of the legislation enacted by the Congress. In the Finance Corps he has had available a disciplined and cooperative force that has joined in the sustained effort that is necessary to bring about such far-reaching alterations.

There are those who contend that the above acts of Congress were not causes, but in themselves legislative effects of a more funda-

mental cause—i.e., that the Army has simply outgrown its traditional and limited financial management. They point to the great size and world-wide distribution of the present Army Establishment, and the radical progress in weapons and operations, as contrasted with the size, distribution, and operations of the pre-World War II Army. Like a man coming of age who can no longer wear his childhood clothes, they say the Army can no longer operate satisfactorily with its pre-war financial management system. A look at the traditional financial management system of the Army is warranted.

The old system

First let us recognize that financial management in its general scope in our American life today is a device used by an executive or manager to help him operate more effectively. We must combine men and materials and equipment to achieve certain objectives and through financial management he uses dollars—(the only common denominator for personnel, materiel, and operations) to constantly help achieve the best combination. In this comprehensive sense, traditional Army financial management was characterized by its high level placement and its limited scope.

The facts are that the Army has in the past used three principal accounting systems—one for personnel, one for materiel, and one financial.

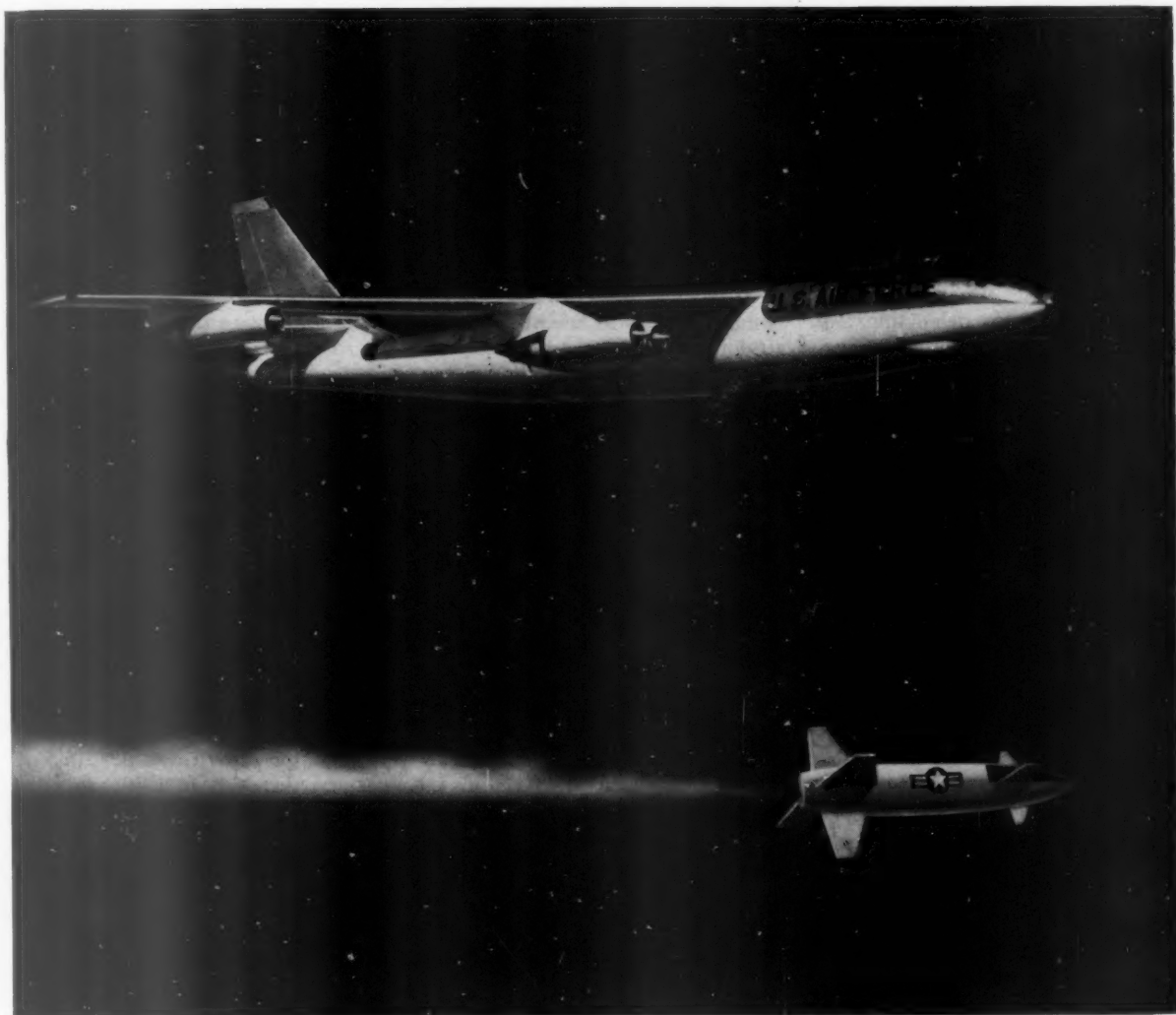
In the Army Staff in the old War Department the personnel elements would have the extremely detailed product of the personnel accounting system, on the basis of which a "troop program"—i.e., a budget for the entire Army in manpower terms—would be established. The logistic element, using the detailed reports from the supply accounting system, would establish lists of "requirements" for the entire Army. Both the personnel and materiel lists would be priced by the Army Staff for planning and control purposes. Then elements of the staff responsible for operations, personnel, materiel, and money, would work together in great detail to endeavor to secure that combination of personnel and materiel that would go furthest toward accomplishing the desired operations with the money available. Decisions reached here were embodied in personnel programs and procurement directives, stated in quantitative terms, which became the guidance and controls for lower level elements of the Army. Thus, field and installation commanders had no really significant financial management responsibility. They normally received in dollar terms only limited resources, and these were divided and subdivided for many specific and often fragmentary purposes.

Why it's being changed

The basic change that the current financial management program makes in the Army is to decentralize and share with the major commanders and the installation commanders the responsibility for comprehensive financial management that rested almost entirely on the Army staff in the past. Even with the pre-war limited Army,

By Major General Harry Wells Crandall

Chief of Finance, U. S. Army



Launched toward the Future in WEAPON SYSTEMS MANAGEMENT

Rascal — GAM-63 air-to-surface missile of the USAF—is an operational example of complete weapon systems management by Bell Aircraft. As prime contractor, Bell's responsibilities embraced the design, development, and production of the entire system including airframe, guidance, rocket engine, servo-mechanical devices, launching and ground support equipment as well as flight testing and training.

The personnel responsible for this successful program has recently been regrouped to form a new *Guided Missiles Division*. Its sole function is to provide complete and coordinated management and production

for any weapon systems program.

The men who make up this division are a skilled and diversified team of specialists with a total of some 100,000 man-years of experience in guided missiles. Prior to "Rascal", they were responsible for Tarzan, Shrike and Meteor. Current responsibilities also include important components for the Nike, Hustler, Regulus, Navaho and various I. C. B. M. and I. R. B. M. programs.

These men have past success to attest to their capabilities and foretell future accomplishments. They will be heard from again and again for important achievements in the years ahead.



**Guided Missiles Div.
BUFFALO, N. Y.**

there is some question as to whether all the detailed matters that were handled by Army staff should have been brought to such a high level. While some centralization in the management of the Army is inevitable, the present tremendously expanded operations combined with the possibility of instantaneous destruction of the Department of the Army Staff through atomic attack makes the maximum possible delegation and decentralization of Army management responsibility both desirable and necessary.

This delegation of financial management responsibility to major and installation commanders could not be accomplished in one quick move. It has been going on for some years and will require more years for its full accomplishment. In all this the Finance Corps has been and will continue to be intimately involved.

The first step

A first essential step, if installation commanders were to be made responsible for their own financial management, was to give them the tools with which to do the job. This required the marrying or merging into the Army's primary command structure of the separate organizations that had existed to provide specialized and accounting service throughout the Army Establishment. To this end Finance Offices, U. S. Army, or FOUAs as they were popularly known, which were directly under the Chief of Finance and made payments for commercial accounts in excess of 75 per cent of total Army requirements, have been closed and their personnel and functions transferred to major or installation or activity commanders to permit the integration of obligating, procuring and disbursing and accounting under the supervision of the local commander. "Finance and Accounting Offices" have been established as an integral part of the administrative organizations of major commanders and installation and activity commanders to perform integrated accounting and disbursing services.

The Finance Corps has played a major role in assisting the Comptroller of the Army in making these changes. Its personnel assisted in

the development of the system for the integration of the old fiscal, accounting and disbursing functions. At the direction of the Comptroller of the Army, it initiated the plan for an orderly conversion from the old to the new systems. In this connection, a short course in Integrated Accounting was developed and given at the Finance School, U. S. Army, to military and civilian personnel sent by all elements of the Army Establishment to receive training and then return home and help install the new system. Members of the Corps carried a heavy part of the load in carrying through the office-by-office change to the new procedures. Now that this major change in Army financial administration is almost complete, Finance Corps personnel are serving in the finance and accounting offices of all Army commands and most Technical Services to help operate the new system. I am happy that the Finance Corps possessed the skills that made it possible for it to do this job.

The problem of establishing stock funds and industrial funds for depot stocks and manufacturing activities of the Army, and of reflecting materiel inventories in dollar values as well as quantitative terms has been largely accomplished by the logistical services working with the Army Comptroller, but Finance Corps personnel have also assisted in this undertaking.

The final step

The final step in bringing financial management to the installation level, which could be undertaken only after the previous steps had been completed, is now being accomplished. This is an integration of budgeting, programming, work reporting, and accounting in a system that will comprehensively reflect for a commander and his staff the dollar values of the personnel, materiel, and objectives for which he is responsible, and thus provide a continuing financial measure of how well he is combining these elements. This system is known as the "Army Command Management System" or "ACMS." This system extends into all elements of a commander's organization but is summarized in his finance and account-

ing office. The Comptroller of the Army has had the initiative in developing and installing "ACMS." He has found the Finance Corps to be a strong and useful tool for this purpose. The personnel of the Corps, both in Washington and in the field, are bearing a heavy portion of the load that is necessarily involved in making this far-reaching change in Army administration.

The expansion of Army Financial Management has greatly increased the need for trained personnel, and the Finance Corps is well aware that additional skills and capabilities are required for the effective operation of the plan. Over 400 Finance Corps officers have launched themselves on vigorous self-training programs and there are no indications that this movement will subside soon. The Finance School, at the center of the Corps' formal training effort, has expanded and broadened both its resident and non-resident courses. In addition to standard accounting, courses have been specifically added for the Army's procedures, at the direction of COA, in integrated accounting, financial inventory and stock funds, industrial funding and budgeting; related courses in military comptrollership and review and analysis are also provided. The older Finance officer courses have had incorporated in them current doctrine and procedures related to financial management. New extension courses in accounting are being offered to civilian employees of the Army this year. While only 1,000 can be enrolled at present, approximately 18,000 have evidenced a desire to receive this training.

The new and broader responsibilities and opportunities for the Finance Corps have been added without diminishing the old. For the Finance Corps is well aware that the Army's bills must be paid legally and properly and that the morale of troops and good industrial relations depend on how well this is done.

Study new systems

The Finance Corps will always be proud of its disbursing role, since in time of war or emergency, the payment of troops is the one financial function that will go for-

ward with the Army in the field and not be pulled back to major headquarter or departmental levels. The Finance Corps has given serious and prolonged concern to how the payment of troops can be improved. To this end a continuing study is being made to improve current procedures or if found appropriate to establish a new system.

The Finance Center, U. S. Army, located at Fort Benjamin Harrison, Indiana, is the largest field organization under the Chief of Finance. It makes centralized payment of allotments of pay to soldiers' dependents, pays retired Army military personnel, pays transportation accounts for both the Army and Air Force, and performs many other centralized Army disbursing functions. The Center has streamlined its organization, consolidated its allotment operations, and taken many other steps that have improved its management and reduced its personnel costs. It has carefully explored the possibility of utilizing electronic data processing equipment and will adopt and expand the use of this equipment as rapidly as economically feasible applications can be found.

What's in the future?

The Finance and Accounts Office, U. S. Army, located in Washington, D. C., another field organization under the Chief of Finance, is expanding its services to the Army financial management program. First it is functioning increasingly as an integrated finance and accounting office for the headquarters of the Army in Washington, and thus relieving many Army agencies of routine fiscal tasks associated with headquarters salaries and expenses. In addition, it must keep pace, in the maintenance of the central Army accounts and the production of summary financial reports and statements, with the progress being made in the revision of the entire financial system of the Army Establishment.

While the Finance Corps is now actively engaged in advancing the Army's financial management system, it is aware that still more interesting and far-reaching changes may lie ahead in the future. New electronic computer and data processing

systems are still in their infancy. The Finance Corps will keep pace with technological progress and continue to accept new obligations and responsibilities so that it can be of increasing value in the improved management of the Army of the future.

Transistor survey Shows vast markets

Production of transistors, the tiny electronic devices which perform many of the functions of vacuum tubes, will increase almost five times in the next three years, according to William J. Peltz, Vice President and General Manager of Philco's Lansdale Tube Company Division.

Mr. Peltz based his forecast of tremendous growth in the demand for transistors on a market survey made for Philco Corporation by the Stanford Research Institute.

In 1959, Mr. Peltz said, production of transistors for military, industrial, commercial and home entertainment uses is expected to reach 125 million units as compared with anticipated production of 26 million units for the current year.

"We are only beginning to realize the multiplicity of uses for transistors," Mr. Peltz said.

TV assists Quality control

Closed-circuit television has replaced the human eye in watching structural spotwelding on the underside of large aluminum panels of the KC-135 jet tanker-transport skins.

At the Ryan Aeronautical Company, San Diego, California, a small General Precision Laboratory TV camera staring untiringly—and with electronic accuracy and clarity—at the welds, transmits a magnified report via coaxial cable to a 17" monitor screen at the side of the welder. No longer must a human "bird watcher" be stationed beneath the welding platform to assure the highest quality; at a glance the single operator now sees the condition of both top and bottom welds.

Bulk Buys

Milk is purchased in five gallon milk dispenser cans in lieu of half pint containers, at NAS Jacksonville, Fla. By the changeover, \$14,250 is estimated as saved.

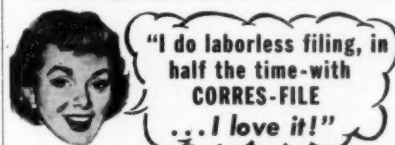
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The Atlantic Fleet:

New Organization for a New Navy

SMART executives of the business world would be among the first to admit that a sound set of management principles and practices are necessary for the efficient functioning of any organization. Military leaders would agree to this too, and few would argue the fact that "American know-how," as demonstrated by business enterprises, is also somewhat of a trade mark of the military services. A prime example of this is the U.S. Atlantic Fleet as it operates today. In many ways, management of the Atlantic Fleet closely parallels methods which are employed by modern-day businessmen.

Background

The story of how the Atlantic Fleet was originated, how it functions and is managed today, requires a quick look back to the years which marked our country's infancy. It also requires some knowledge of the Atlantic Ocean itself, and of the man who commands this potent naval force.

S-shaped and narrow in relation to its length, the Atlantic Ocean comprises some 31 million square miles of water. In its transformation from a deserted waste into a vast arena of commercial and military activity, a succession of world powers have risen and fallen from control of the vital sea routes which connect the new world with the old.

Today, the United States replaces all other countries as the leading naval power in this important area. Sailing the vast stretches, from Newfoundland to Ireland, and from the Bering Strait to Antarctica are hundreds of grey-hulled U.S. Navy warships. This is the U.S. Atlantic Fleet, the most powerful naval force ever assembled by man.

America's position as the dominant Atlantic power was slow in

being realized. It took many years of struggle against the naval supremacy of Great Britain to win a fair share of the seas. Starting with the Monroe Doctrine, and following with two great wars, our naval potential slowly, yet steadily, progressed from mediocrity to greatness.

How it operates

The U.S. Atlantic Fleet operates today under two distinct command structures. It serves as the naval component of the Atlantic Command, a unified Navy-Army-Air Force command, which becomes fully activated in time of war. Included in this far-reaching military command are the Iceland Defense Force and the Caribbean Sea Frontier, guarding both the northern and southern approaches to the United States. The Fleet is also an operating force of the United States Navy. Under both set-ups the Atlantic Fleet is connected through the Chief of Naval Operations with the military planning policies of the Joint Chiefs of Staff.

In keeping with this arrangement, the same individual serves in the dual capacity of Commander in Chief Atlantic (CINCLANT), and Commander in Chief U.S. Atlantic Fleet (CINCLANTFLT). Filling this signal billet is 59-year old Admiral Jerauld Wright, USN. From his Norfolk, Virginia, headquarters Admiral Wright directs over 200,000 naval and Fleet Marine Force personnel in the operation of more than 500 ships and thousands of naval aircraft. This is a major part of our nation's sea potential.

Admiral Wright is a man of many titles. Each carries with it tremendous responsibilities. In addition to his two U.S. Atlantic commands, he is also the (NATO) Supreme Allied Commander, Atlantic (SACLANT), the world's first international ocean command. His primary task here is the control of the North Atlantic for the North

Atlantic Treaty Organization and the support of NATO forces abroad.

The Admiral commands the Atlantic Fleet during a revolutionary naval period. Conversion from oil burning to atomic powered ship engines has been initiated; nuclear warheads are replacing conventional TNT shells; naval aircraft have gone from propellers to jets, and from subsonic to supersonic speeds in the air. Leading the way in this revolution of naval power are ships like the giant attack aircraft carriers FORRESTAL and SARATOGA; the guided missile cruisers BOSTON and CANBERA, both equipped with the Terrier, an anti-aircraft missile weapon; and the atomic powered NAUTILUS, which sailed 60,000 miles (or 20,000 leagues) without refueling, equaling the mark set by Jules Verne's fictional craft of the same name.

This is all a part of the so-called "New Navy", an ocean-going force as modern in its own right as any jet-age aircraft or streamlined ground vehicle. To assist him in regulating, coordinating and guiding this modern fighting force, the Admiral has gathered around him a select staff of subordinate officers, numbering some 200, and over a thousand enlisted men.

Like big business

Assisting and advising the Commander in Chief in carrying out his duties is his Deputy Commander in Chief, a vice admiral by rank, and second in command. This office corresponds with that of an executive vice president in a large business corporation. One step removed from the top of the fleet's chain-of-command ladder, the officer filling this billet acts in the Commander in Chief's place during his absence. He is also given the responsibility for the staff's efficient functioning and for the execution of policies formulated by the Commander in Chief.

In liaison between the Admiral

From the headquarters of
Admiral J. Wright
Commander, U.S. Atlantic Fleet

and his Deputy and the lower working levels is the Deputy Chief of Staff. This position is filled by a rear admiral, who has under his supervision a team of captains. These are known as the Assistant Chiefs of Staff for the six staff divisions, which include administration, communications, plans, operations, logistics and intelligence.

Operating with an efficiency that would be the envy of any large American industry, the CINCLANT-CINCLANTFLT staff runs on a 24-hour, 365 days a year basis. In simplest terms, its most important concern is "Fleet Readiness"; all efforts, from the Commander in Chief, down through the staff to the individual seaman serving on board ship or ashore, are directed towards the maintenance and augmentation of this factor. This implies a constant and maximum standard of operation and efficiency—positive assurance that the fleet can become an active offensive or defensive force within minutes of notice.

Branch offices

Comparable to branch offices of the six staff divisions (see box) are the subordinate flag commands. These include fleet, force, and type commands, each of which is charged with specific functions and missions.

The mission of the SECOND Fleet, for example, is offensive. It operates striking forces comprised of units of various types provided by other commands of the Atlantic Fleet. The SECOND Fleet also conducts striking force exercises for training purposes.

Responsible for defensive operations is a new and potent Anti-Submarine Defense Force, commanded by a vice admiral with headquarters at Norfolk. Designed to cope with the Russian submarine threat of more than 400 submarines, the new force is made up of fleet units provided in the numbers needed by other fleet commands.

Providing administrative, training, and logistic functions are the so-called Type Commanders. These include the Air Force; Submarine Force; Destroyer Force; Service Force; Mine Force; Battleship-Cruiser Force; and the Amphibious Force. The latter is a specialist in

How Atlantic Fleet Management is Organized

Six Staff Divisions

● Management of far-flung units of the fleet is accomplished primarily through the facilities of the Communications division, the largest of the six staff divisions. Operating in conjunction with a mammoth naval communications complex, it serves the other five staff divisions by providing contact not only with the fleet, but also with military and governmental units throughout the world. Basically, it differs little from any naval communications set-up, whether aboard a ship at sea or in the Pentagon. However, since it serves Admiral Wright's staff, the message traffic being sent and received through its facilities reaches tremendous proportions.

This voluminous flow of communications, channeled upward from the operating forces to the proper area of cognizance on the Commander in Chief's staff, is a major factor in maintaining fleet readiness. Every bit of information, whether it concerns a major sea exercise or minor developments, is received and evaluated by the proper staff members. Staff-originated directives are passed to subordinate commands, and reports are submitted to higher authority.

A quick glance at the five other staff divisions would show them to be concerned with the following jobs, in addition to a host of other minor, yet important tasks:

2—Intelligence

The Intelligence division is responsible for keeping the Commander in Chief informed of the war-making capabilities and intentions of foreign nations. It also provides the Admiral and his principal subordinate fleet commanders with information concerning any threats to the security of forces under their jurisdiction.

3—Operation

The Operations division is organized to provide optimum performance of peacetime fleet tasks and a smooth transition to wartime conditions. To determine what requirements are necessary to maintain or improve combat readiness, the division carries on a continuous study of all aspects of fleet readiness and training. The division publishes operational orders; prepares advance fleet employment schedules; and supervises current operations and exercises being carried on in the Atlantic Fleet.

4—Plans

The planning of task organization, force assignments, and deployments for the fleet is accomplished by the Plans division. This also includes the deployment of aviation, submarine, and (in time of war) coast guard units, and the evacuation of non-combatants from troubled areas. The division is also much concerned with the carrying on of peacetime atomic operations and tests within the Atlantic Fleet.

5—Logistics

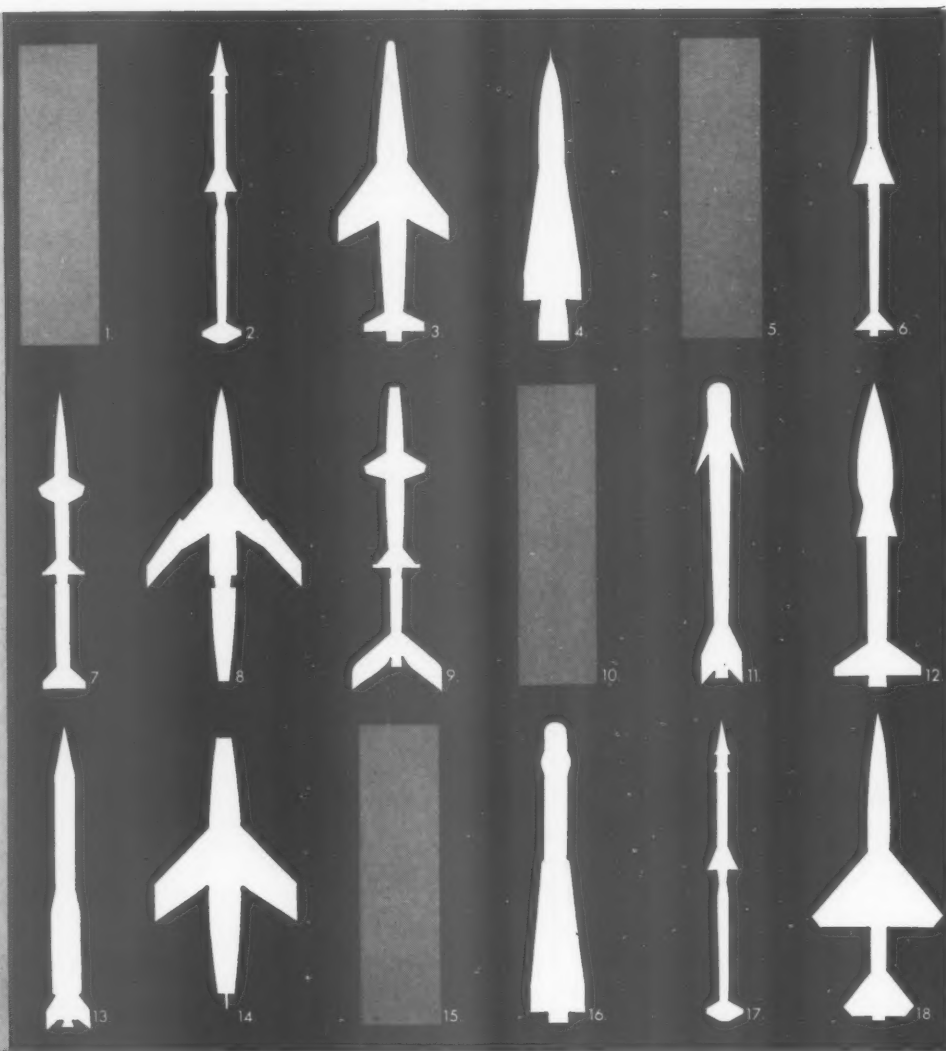
The Logistics division is interested in seeing that the fleet is supplied with all necessary materials for efficient operation, and with the maintenance of fleet units, including the assignment of homeyards and ports for individual ships and the periodic overhauls and drydocking of vessels for repairs. It takes care of base development, whether in this country or overseas. This division also has a petroleum section which keeps close tabs on the supply, delivery and use of petroleum products in the fleet.

6—Administration

The Administration division is concerned with the preparation and distribution of Atlantic Fleet regulations, and with instructions directed from the Commander in Chief to his staff. It exercises control over staff personnel; processes incoming and outgoing mail; and takes care of the billeting and quartering of officers and men assigned to duty at Admiral Wright's headquarters. Included in the Administration division are the fleet postal officer, who coordinates the routing, handling, security and delivery of mail throughout the fleet; the fleet athletic officer, who advises the Commander in Chief on the physical conditioning programs being carried out in the fleet; and the fleet chaplain, who acts in matters pertaining to the spiritual and moral well-being of personnel ashore and afloat in the Atlantic Fleet.

Thus, through the six staff divisions, the many units of the Atlantic Fleet maintain a closely regulated unity which is necessary for the operational readiness of any large fighting force.

1. ATLAS
2. NIKE
3. LACROSSE
4. HAWK
5. THOR
6. SPARROW
7. TERRIER
8. SNARK
9. TALOS
10. TARTAR
11. SIDEWINDER
12. LITTLE JOHN
13. TITAN
14. REGULUS
15. GOOSE
16. FALCON
17. NIKE B
18. BOMARC



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- Auxiliary Power Supplies
- Control Systems



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amphibious operations and works closely with the Fleet Marine Force.

Sound fleet management, the Admiral believes, cannot be accomplished if he remains desk-bound. Since taking over as CINCLANTFLT, he has seldom spent more than a month or two at his Norfolk headquarters without making inspection trips to the fleet. Only recently he returned from a 10-day, 20,000-mile junket to Antarctica, where he personally inspected the job his Atlantic Fleet Task Force 43 is doing, through Operation Deep Freeze, to support United States participation in the International Geophysical Year Program. The Admiral is the highest ranking military officer ever to set foot on the frozen continent.

Even more typical of his "flying" inspection visits to the fleet was one just completed to Guantanamo Bay, Cuba, where the Navy maintains extensive training facilities for ships undergoing shake-down and refresher cruises. Leaving Norfolk on a Tuesday afternoon, the Admiral "ship-hopped" by helicopter to some 20 men-of-war, and was back at his headquarter's desk by Thursday. During this three-day trip he observed underway exercises ranging from anti-aircraft practice to underway replenishment.

Since 1941, when President Franklin D. Roosevelt established the post of Commander in Chief, U.S. Atlantic Fleet, there have been eight 4-star admirals who served in this capacity. Admiral Wright was selected for the job in April 1954. He had previously served as Commander in Chief, U.S. Naval Forces, Eastern Atlantic and Mediterranean (CINCNELM), where he commanded all U.S. Navy ships, aircraft and personnel in an area extending from the North Sea to the Indian Ocean, including the Mediterranean with its U.S. SIXTH Fleet.

Banking the Bunker

Naval Supply Center, Norfolk, Va., reclaimed 23,307 barrels of Navy Special Oil to be issued to activities as bunker for boiler plants. After deducting the cost of running the reclamation plant, a saving of \$45,707 was realized.

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TYPICAL USE	EXTERIOR-TYPE (Waterproof glue)	INTERIOR-TYPE (Moisture-resistant glue)
Where appearance of both sides important. Cabinet doors, single thickness walls, etc.	EXT-DFPA-A-A	INTERIOR-A-A-DFPA
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Special concrete form grades. Both faces sound, solid, smooth.	Ext. PlyForm® (B-B) Maximum Re-use	Int. PlyForm® (B-B) Multiple Re-use
Unsanded structural and maintenance panel. Sheathing, crating, temporary screening.	Exterior Glue PlyScord® (C-D)	PlyScord® (C-D)

SIZES: Standard fir plywood thicknesses are from 1/4" through 3/4"; standard size is 4' wide, 8' long. Other thicknesses and sizes are also available, including "king-size" scarfed panels up to 30' and 50' long.

TEXTURED FIR PLYWOOD — Fir plywood comes in several smart textured panels for special decorative applications such as siding, paneling, displays and fixtures. These include *Texture One-Eleven* Exterior plywood (deep parallel groove pattern, shiplapped edges) and panels with attractive *brushed, striated, or embossed* surfaces.

OVERLAID FIR PLYWOOD — is Exterior fir plywood with resin-fiber overlay permanently fused to one or both sides of panel. *High density* is hard, glossy, abrasion-resistant (use for long-lasting signs, shelving, concrete forms); *Medium density* overlaid plywood is smooth, with texture similar to drawing paper (ideal paint base for signs, fixtures, siding).



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Under our system of democratic capitalism, anyone with a few dollars in his pocket can go into business with the Ford family or the duPont family . . . or own part of General Electric or U. S. Steel—simply by purchasing common stock in those companies. And some nine million people have done just that. From the viewpoint of number of shares traded, number of shareholders, and companies to choose from, common stocks are indeed the most common of all. For example, about 1,100 of the 1,500 securities listed on the New York Exchange are common stocks, and many thousands more common stocks are traded on other exchanges or over-the-counter by dealers.

In simplest terms, a share of common stock is a certificate representing part ownership of a company. The ownership of all common stockholders consists of the value of the company's assets, less sums due creditors and other claims. The stockholders elect the directors of a company, and through them control the management policies of the company.

In the last two articles we discussed the senior position of preferred stock and bonds. Why, then, do most investors buy common stock? The common stockholder is

seeking greater income or growth (or both) than is offered by the senior securities. As a company prospers, a portion of the profit is paid to the common stockholders in dividends, after satisfying claims of the senior securities. As the company's profits increase, the common stockholders usually benefit from larger dividends. Of course, if there is little or no profit, the stockholders may or may not receive dividends. As the company's earnings and dividends increase, the market price of the common stock rises, so that the investor may be able to sell his stock at a profit. The common stockholder participates in the increased earnings and growth of a company, whereas the bondholder, and usually the preferred stockholder, do not.

The fluctuations of the market price of a common stock are caused by relative supply and demand. When the demand for a particular stock exceeds the supply, the price is forced up. So the market price of a particular common stock at any time reflects the buying public's appraisal of the company's earning power and/or growth potential.

Common stock prices, as measured by the various market "averages," have had a long, gradual upward trend over the past 75 years. This does not mean that all stocks have risen, nor that for any particular period the movement was always up. There have been periods when the "averages" were down. There have been individual issues that declined until they dis-

appeared. But the overall, long-range trend has been up—always up.

To illustrate how individual issues may vary from the "averages," and to show how little the "averages" mean to most small investors, let's look at the last two years. During 1955 the Dow-Jones Industrial Average rose 20.8%. Yet during that year only 874 stocks on the New York Exchange advanced, while 478 declined and 163 were unchanged. During 1956 the Dow-Jones Industrial Average showed a slight rise of 2.26%. Yet 901 stocks declined during that year, while 439 rose, and 172 were unchanged.

Obviously, the proper selection of a common stock at the right time is all important. Considering that there are thousands to choose from, making the right choice is not an easy job—even for the professional. We all know the arm-chair expert who made a killing last year in PDQ Co. stock . . . but you seldom hear a peep from the other two experts who lost just as much on XYZ Co. stock.

So you want to buy a stock? Fine. Here are a few of the things you will want to do in order to make a wise selection: Study the financial position of the company—soundness, capitalization, reserves, etc. Check into the products of the company . . . competition . . . research for new or improved products . . . distribution. What are the expansion plans? How progressive is the management? What factors point to stability or growth of earnings or value? These points, and many more, will have a direct bearing on the dividends and growth of your stock.

Now that you have selected and purchased a stock, you must continue to "supervise" it. Knowing when to sell is just as important as knowing when and what to buy. A company that was a very sound investment last year may be a



by **W. Mac Stewart**
Vice president—Research,
Hamilton Management Corp.

This is the third in a series of articles dealing with the types of securities most often considered as an investment medium by career officers. In the first two articles Mr. Stewart discussed bonds and preferred stock.

Remember, if you have specific questions concerning investments, Mr. Stewart will be happy to answer them for you personally by mail. Address your inquiries to Financial Editor, Armed Forces Management, 205 South Second Street, Rockford, Illinois.

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shaky one today. To protect your investment you must examine your securities as closely from day to day as you did to select them.

Unfortunately, our economic picture has become so complex that few individual investors have the specialized training, research facilities, or personal time available to properly select and supervise their investments. As a result, many small investors buy one or two "safe" stocks, which they lock away in a box and forget. If they were lucky and picked good growth stocks, they may fare well. However, the lack of supervision puts them in a position of some risk, with their limited funds concentrated in one or two issues.

Because of these circumstances, more and more investors who wish to enjoy the benefits of common stock investment, with a minimum of risk, are turning to mutual funds. In this way they have participation in a broad portfolio of stocks (with the protection afforded only by diversification) as well as having professional management to select and supervise their securities.

In next month's article we will explain the theory of mutual funds, and why they are one of the fastest-growing facets of our economy.

Bay Area Cuts Costs

Outstanding Improvements
Reported By: Bay Area Army Terminal Center.

Improvement: Reduction in Household Goods Transportation Costs.

Background: Household goods received from overseas for ZI shipment are held in the intransit freight area pending consolidation of common destination household goods for lower transportation costs. Consolidated shipments must be rated, routed, and billed prior to shipment. This is a high priority activity due to the expensive nature of the operation and the policy of providing best possible service to customers.

Before Improvement: Household goods received from overseas were moved directly to the intransit freight area and warehoused by general destination. Household

goods were later assembled for rail car loading according to instructions received from the freight traffic activity. This resulted in delays, pending arrival of loading instructions. Additionally, double handling of household goods was required since household goods were first placed in a general destination area and then transferred to the loading area. Loading instructions were based on warehouse tally of household goods received. As a result, consolidations were made strictly on the basis of warehouse tallies, not on manifested information.

Loading instructions, including rating, routing, and billing of household goods, are now prepared by the freight traffic activity on the basis of advance manifests. As household goods are received from the pier area, they are moved directly to the loading area and assembled according to the advance loading instructions. The over-all time to receive, assemble, and load household goods to carrier has been materially reduced.

Gains: Based on current workload, an estimated reduction in transportation costs of over \$15,600 per year will be realized. Releases and routings are received from the Transportation Zone Office from one (1) to two (2) days sooner, with this savings in time passed on to the individual in terms of earlier receipt of household goods.

Too Bad to Burn

NAS Corpus Christi, Texas, salvages waste oil for use in surfacing roads, streets and parking areas. Savings of \$420 are estimated.

US Radar Line Moves 1,500 Mi. Out in Pacific

Honolulu (AFPS)—Far-ranging radar picket planes have carried America's distant early warning line 1,500 miles out across the Pacific.

Recent activation of two WV-2 "flying sentry" squadrons at nearby Barbers Point NAS extended the electronic net of ground and air stations—already guarding northern and eastern approaches to the continent—westward to the mid-Pacific.

The airborne early warning wing uses Lockheed Super Constellation planes outfitted with more than six tons of radar equipment.

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How USAFE Gets Top Management From the NCO

ABOUT ONE year ago the Directorate of Statistical Services established the NCO Management Council to provide for a group of experienced and qualified airmen to assist the Director and his staff in the management of the Directorate, and to give recognition to a body of military personnel whose position in the organizational structure makes them the key to any effective management program.

Today's Air Force is BIG BUSINESS! It is a multi-billion dollar enterprise, and as such, must be well managed at all supervisory levels in order to obtain a fair return on investment. Our first line supervisors, the non-commissioned officers, are comparable to the foreman's status in private industry. The foreman in industry has often been referred to as "the key" supervisor and the importance of his position has been given much emphasis. The first line supervisor has one of the most important management roles in an organization serving as the link between the worker and the junior executive. Thus, the non-commissioned officer is in one of the best positions to see, to evaluate, to comment upon, and to recommend better ways and means of managing an operating unit.

In order to fully exploit the management know-how of the NCO and to realize the maximum management potential possible from this key man in a key spot, ways and means must be found to properly motivate and stimulate his desire to contribute management ideas and suggestions. Once he is motivated, a medium must be found or established through which his ideas can be readily conveyed to top management, where the necessary action can be taken to carry them into effect. We approach the motivation problem by requiring each NCO who has not done so

previously, to attend the USAF 40-hour Management Course for Supervisors. We hold two such courses per year in our Directorate Training Room. Further motivation is engendered by the fact that we give as much publicity and recognition as possible to the work of the Council and to the individual members of the Council. Of course, the NCO Management Council itself is the vehicle or medium through which the ideas and suggestions are funneled to the Director. NCO's who are well versed in the principles of management, are properly motivated, and who are working together as a group, can make a real contribution toward the better management of personnel and materiel resources.

Composition of the Council

The NCO Management Council is composed of five master sergeants, three technical sergeants, and one staff sergeant. With the exception of the NCO in charge of the Management Group (a staff agency within the Directorate of Statistical Services), who is a permanent member of the Council, the other members are appointed by the Director, based on recommendations received by chiefs of the various divisions and staff agencies of the Directorate. The Council membership is reviewed every six months, and at this time two master sergeants, two technical sergeants, and the one staff sergeant are replaced by new appointees. Those non-commissioned officers who have contributed most to the Council's work will remain on the Council for another term or six months' period. Non-commissioned officers who have done outstanding work on the Council may serve more than two terms or even indefinitely on the Council. Replacements are appointed by the same procedure as was used to select members for the initial Council. Those members who are to be dropped from the Council after each term are selected by the permanent member (NCOIC, Man-

agement Group) in concert with the Director. These "selections out", of course, are based upon lack of contributions by that member to the work of the Council.

Chairmanship of the Council is on a seniority basis, and is rotated every two months, thus affording an opportunity for senior NCO's to gain experience in conference leadership. From the personal development standpoint, all members of the Council gain training and experience in Conference techniques. The Staff sergeant or junior member of the Council serves as Recorder, and is thus responsible for writing and distributing minutes of the Council meetings. One copy of the Council's minutes or proceedings is forwarded to the Director with other copies going to the Chiefs of the various divisions and staff agencies of the Directorate.

The third NCO Management Council is now in being. Two members of the original group are still on the Council, a Master Sergeant and a Technical Sergeant. Since the Council's inception one year ago, 9 master sergeants, 6 technical sergeants, and 3 staff sergeants have served as members. The longer that the Council remains in being, the more effective will be its work, for the most productive NCO's, as they are found, are retained on the Council.

Operation of the Council

The Council operates on a project basis. The projects can be either self-generated by members of the Council or can originate from suggestions received from other members of the Directorate. Any person assigned to the Directorate can submit a project to the Council. In order not to dissipate the time of the Council with meaningless suggestions and ideas, all projects are routed through the Chief of the Management Group for screening, and then to the Director for concurrence before being passed on to the Chairman of
(Continued on page 26)

**By Colonel Harold B. Simpson,
USAF**

*Director of Statistical Services
DCS/Comptroller Hq, USAFE*

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THE FLIGHT HEARD 'ROUND THE WORLD

Recently three B-52 bombers flew around the world in 45 hours and 19 minutes. They were only specks in the vastness of the sky, yet they were in voice-contact every mile of the way—with SAC headquarters in Omaha, with each other, with bases along the route and with the KC-97 tankers that refueled them in the air.

Their speed-of-light contact was the AN/ARC-21 liaison communications set in each of the ships. This is a long-range, pressurized, high-altitude airborne system, capable

of world-wide communications. It may be operated by the pilot, so no radio operator is needed. It is characterized by minimum training requirements, simplified maintenance, high reliability, positive channel selection—with a choice of any 20 of 44,000 frequencies.

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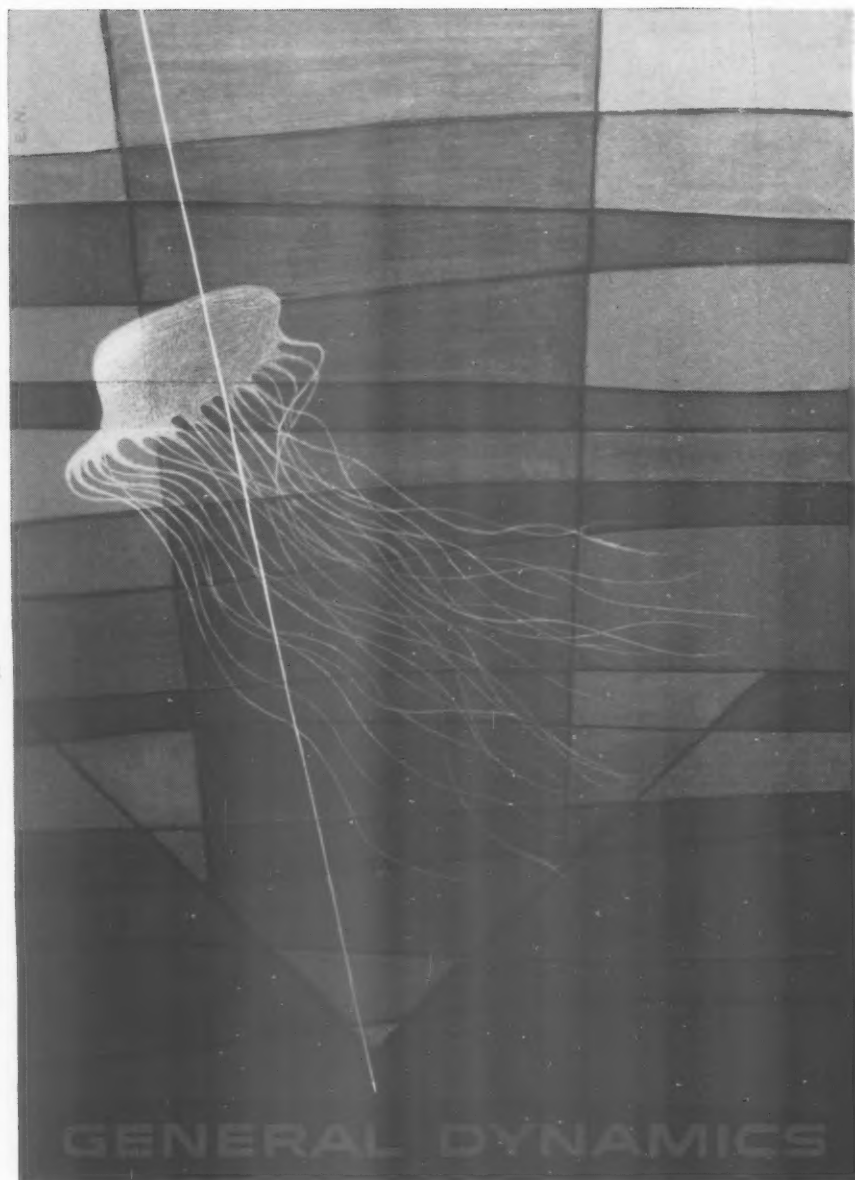


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extract new minerals from
the mountains of, seek
new elements on the shelves
and beaches of,
herd new flocks to the grasses of,
draw new energies from the tides, the waves,
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(Continued from page 22)
the NCO Management Council. Council-initiated projects are encouraged. Projects are submitted on a specially designed mimeographed format that is readily available throughout the Directorate.

Most projects are considered by the Council as a whole. However, in those cases where special research is required or where the technical knowledge of one individual on the Council is needed, the project or parts of it are assigned to individual members. After a project has been completed, it is forwarded to the Director with either the Council's recommendation that it be adopted or not considered. By indorsement back to the Council, the Director informs that body what action he has taken or contemplates taking in regard to the specific project. A permanent file on all projects is maintained by the permanent member of the Council—the NCOIC of the Management Group.

The Council has two formal meetings per month. It meets the first and third Mondays of the month in the Directorate Conference Room. Other meetings are called by the Chairman on an "as required" basis. The regular or formal meetings are held during working hours. The special meetings are held either during duty hours or after work, depending on the circumstances. Most of the research required on the projects is done on the member's own time.

Subject Matter Considered

The NCO Management Council generally concerns itself with working in the manpower management areas of human relations, communications, multiple management and supervisory development. However, projects sent to the Council are not necessarily confined to these areas. During the past year, besides the manpower management area, projects were considered in the fields of production control, organization analysis and work simplification. Inasmuch as all NCO's who are appointed to the Council must have first completed the USAF 40-hour Course for Supervisors, they are all familiar with the basic concepts and principles of management. Working on the Council enables them to place

into practice the theories taught in the Management Course.

Accomplishments of the Council

In one year's time the Council has considered twenty-nine major projects. Of the twenty-nine major projects, sixteen were recommended for approval, and of these sixteen, eleven were adopted as recommended or at least in part, by the Director. Of the eleven suggestions adopted, the more important ones were: the establishment of a mimeographed bi-monthly Directorate News Bulletin, payment of the troops before work in the billets, development of a machine orientation program for visiting staff agencies, improvement of the local snack bar, and the development of an orientation booklet for newly assigned personnel. At this writing, the Council is in the final stages of completing a program for after-hours NCO training for selected A/1C and A/2C's assigned to the Directorate.

Recognition of Council Efforts

Without a doubt, recognition perpetuates good performance. Thus we make it a point to give as much recognition as possible to the individual members of the Council as well as to the work of the Council as a whole. We also make a determined effort to publicize those projects completed by the Council and especially those that are adopted by the Directorate.

A section of each issue of "Stat Chat", our bi-monthly publication, is devoted to the activities of the NCO Management Council. A group photo of each Council is framed and hangs in the Director's office. A group photo of the current NCO Management Council is posted in the "Recognition" Section of the Directorate Bulletin Board. Articles featuring the organization and the work of the Council have appeared in the Air Force Times, Stars and Stripes newspaper, and the Wiesbaden Post (weekly publication of the 7100th Support Wing). Each NCO receives, when he is originally appointed or re-appointed to the Council, a letter from the Director congratulating him on his selec-

tion for membership to this Group. Service on the Council is given a great deal of consideration when recommending NCO's for promotion. All in all, every means possible is used to "spotlight" the work of the Council, and the efforts of the individuals composing it.

Conclusion

Non-commissioned officers have always provided the essential command line between commissioned officers and enlisted personnel. We hope that by establishing an operating group such as the NCO Management Council in our organization, that the NCO's will play a more important role in the management line between the commissioned officers and the enlisted personnel. Today, more than ever, a modern, effective, well-managed military establishment depends upon an alert, competent body of non-commissioned officers, and upon the maximum utilization by top management of the capabilities of this important supervisory group.

An NCO in today's Air Force must be more than a technician; he must be a good manager and a good supervisor as well for the Air Force to receive full utilization of his services. It is necessary to find as many vehicles as possible by which the management ideas and management knowledge possessed by this key supervisory group can be exploited and best employed. We think that we have found one good way—The NCO Management Council! Commanders or directors who do not take advantage of the wealth of management talent and know-how possessed by their non-commissioned officers are missing a great opportunity for the administrative and operational improvement of their organization.

Ordnance Tank Automotive Center, Detroit, Michigan. OTAC employees pocketed \$1165 between January 1 and November 30th in 1956 with 14 ideas that saved several hundred thousand dollars to the government. The most publicized was that reported to "save 46 million miles of red tape." The Field Service Division led the command with nine awards.

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In this professional vacancy list published each month ARMED FORCES MANAGEMENT invites the listing of any position, GS-9 or above. This cut-off point was established on the basis that GS-9 and above positions entail as a major portion of the duties management responsibilities. Space limitations in this Department will preclude so-called "wholesale listings". Apply direct to the installation where the vacancy exists. For information about other jobs, write or visit the nearest military installation.

Title and Location Grade Remarks

U. S. Naval Aviation Safety Center U. S. Naval Air Station Norfolk 11, Va.

Digital Computing Systems Specialist GS-301-11
Reply Attention: Mr. L. P. Jones, Research Analyst

BIOLOGICAL WARFARE LABORATORIES

Fort Detrick, Frederick, Maryland

Biologist	GS-9
Bacteriologist (Medical & General)	GS-9 to GS-11
Biochemist	GS-11 and GS-12
Veterinarian (Pathology)	GS-14
Medical Officer (Pathology)	GS-13
Biological Science Administrator	GS-13
Bacteriologist (Medical)	GS-12
Chemical Engineer	GS-9 to GS-12

CORPS OF ENGINEERS, U.S. ARMY

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Supervisory Civil Engineer (Levee Design)	GS-11	
Supervising Hydraulic Engineer (General)	GS-12	
Hydraulic Engineer (Hyd. Investigations)	GS-9 and GS-11	5 vac.
Hydraulic Engineer (General)	GS-9 and GS-11	
Materials Engineer	GS-9 and GS-11	
Construction Management Engineer	GS-9 and GS-11	2 vac.
Mechanical Engineer	GS-9 and GS-11	
Electrical Engineer	GS-9 and GS-11	
Civil Engineers (Utilities, Estimates, Soils Mech.)	GS-9 to GS-11	5 vac.

U.S. COAST GUARD

USCG Headquarters, Washington 25, D.C.

Engineering Aid (General)	GS-9	
Electronic Engineer (Radio)	GS-9	
Civil Engineer	GS-11	2 vac.
Civil Engineer	GS-9	
Electronic Engineer (Radio)	GS-9	
Architect (General)	GS-11	
Marine Engineer	GS-11	
Civil Engineer	GS-9	2 vac.
Electrical Engineer	GS-11	
Civil Engineer	GS-9	
Civil Engineer	GS-9 and GS-11	3 vac.
Electronic Engineer (Radio)	GS-9	
Maintenance Engineer	GS-9	

NORFOLK NAVAL SHIPYARD

Portsmouth, Va.

Supervisory Physicist (General)	GS-12
Physicist (General)	GS-9 and GS-11
Civil Engineer	GS-9
Mechanical Engineer	GS-11

MILITARY SEA TRANSPORTATION SERVICE

Washington, D.C.

Analytical Statistician	GS-11
Marine Engineer	GS-11
Statistical Officer	GS-11

UNITED STATES AIR FORCE

Headquarters, Washington 25, D.C.

Contract Specialist	GS-11 and GS-12	
Electronics Quality Control Inspector	WB-18	3 vac.
Machined Components Quality Cont. Insp.	WB-18	2 vac.
Rubber Quality Control Inspector	WB-16	
Officers Club Director	GS-11	
Supervisory Accountant	GS-10	
Electrical Engineer	GS-11	
Mechanical Engineer	GS-9	
Safety Engineer	GS-12	
Position Classifier	GS-11	
Supervisory Accountant	GS-11	
Supervisory Accountant	GS-9	

Title and Location

Grade Remarks

UNITED STATES AIR FORCE

Headquarters, Washington 25, D.C. Kirtland AFB, N. Mex.

Aeronautical Development Engineer	GS-12	
Flight Test Engineer	GS-12	
Aeronautical Engineer	GS-12	
Physicist (General)	GS-12	3 vac.
Electronic Engineer	GS-12	
Mechanical Engineer	GS-12	
Mechanical Engineer	GS-11	
General Engineer	GS-11	
Aeronautical Engineer	GS-11	
Flight Test Engineer	GS-11	
Aeronautical Development Engineer	GS-11	
Aeronautical Development Engineer	GS-9	
Flight Test Engineer	GS-9	
General Engineer (Standardization)	GS-9	
Mechanical Engineer	GS-9	
Aeronautical Engineer	GS-9	

Langley AFB, Va.

Fire Prevention Engineer	GS-12	
Electrical Engineer	GS-12	
Mechanical Engineer (Heating & Ventilation)	GS-12	
Medical Officer (General Medicine & Surgery)	GS-12	
Supervisory Accountant	GS-11	2 vac.
Accountant	GS-11	
Supervisory Cost Accountant	GS-11	
Cost Accountant	GS-11	
Supervisory Electrical Engineer	GS-11	
Budget Analyst	GS-9	
Supervisory Production Control Specialist (General)	GS-9	

LEXINGTON SIGNAL DEPOT

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Accountant	GS-9

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Washington Management

Top Navy Shuffle. President Eisenhower recently nominated Rear Admiral Robert E. Dixon as Chief of the Navy Bureau of Aeronautics. Admiral Dixon is now commander of the Pacific Fleet's First Air Wing. He will succeed Rear Admiral James S. Russell, who has been nominated for promotion to Vice Admiral and will soon replace Vice Admiral Robert Goldthwaite as Deputy Commander and Chief of Staff of the Atlantic Fleet. Admiral Goldthwaite was named to succeed Vice Admiral Austin K. Doyle as Chief of Naval Air Training.

Navy Rocket Sets Record. A new and improved AEROBEE-HI punched a 190-mile hole in the sky recently to set a new altitude record for single-stage rockets. The powerful motor of the tall, narrow missile burned out 53 seconds after launching after pushing the rocket upwards at a speed of 7,000 feet per second. The rocket was fired from the southern end of the vast White Sands Proving Grounds in New Mexico.

General McNamara Named Army QMG. President Eisenhower has nominated Major General Andrew T. McNamara, USA, to be the new Quartermaster General of the Army, succeeding Major General K. L. Hastings, recently retired. General McNamara has been serving the last year as Assistant Chief of Staff, G-4, United States Army Europe.

USAF TAC Wing Receives RF-101. The U.S. Air Force's first supersonic reconnaissance aircraft,

the McDonnell RF-101, is being assigned to the Tactical Air Command's 363rd TAC Reconnaissance Wing at Shaw Air Force Base, South Carolina. The RF-101 is the reconnaissance version of the F-101 long-range fighter.

CDR Quick to Waves Director. CDR Winifred Redden Quick will become director of the WAVES and Assistant Chief of Naval Personnel for Women on 1 August 1957. She will be promoted to the rank of Captain, and succeeds Captain Louise Wilde as the fifth director of the WAVES. CDR Quick is presently stationed in London on the staff of the Commander-in-Chief of Eastern Atlantic and Mediterranean Naval Forces.

New Bill to Authorize Doctor-Dentist Draft. Legislation that will authorize the President to issue special draft calls for physicians and dentists under the age of 35 who have been deferred from military service has been requested of Congress by the Department of Defense.

These physicians and dentists, who were deferred to obtain their professional education, will be subject to call by the Selective Service System if the military departments cannot obtain sufficient volunteers to meet their needs, the Defense Department said. The main group affected by the proposal are recent dental and medical school graduates who have not fulfilled their military obligation, the Department said.

The proposed legislation would amend the Universal Military

Training and Service Act in lieu of continuing the Special Doctors' Draft Act, which expires July 1, 1957.

Army Uses Rockets to Map North Wind. The Army is now firing high altitude rockets from the top of the world to map the North Wind near its source, the Department of the Army announced recently.

The experiments, planned by Army scientists of the U. S. Army Signal Engineering Laboratories at Fort Monmouth, New Jersey, are expected to lead to more accurate predictions of cold weather to come.

The rockets will reveal for the first time the precise direction, speed and temperature of icy winds responsible for winter cold spells as well as other high altitude winds. These currents of air will be thoroughly explored to an altitude of 80 miles.

The first specially-equipped Aerobee rocket has already been fired (November 12, 1956) from Fort Churchill, deep in northern Canada. Nine more launchings will follow during the 1957-58 International Geophysical Year, the first of which will take place next July.

The study is part of the 40-nation International Geophysical Year program at the Canadian-U. S. proving ground in Manitoba. Results of the tests will be shared among all IGY nations.

The Signal Corps rocket program at Fort Churchill is the second leg of an Army worldwide spot-check of high altitude mass currents, which spawn our weather. Extensive observations of western air currents have already been made at White Sands. Another series of IGY-Army launchings is planned at Guam, in the West Pacific.

This huge triangle of observations will allow scientists to reconstruct the worldwide wind pattern to high altitudes never before possible. Knowledge of these winds is important for long-range forecasting and for basic understanding of weather.

Three SAC Wings Reassigned

ARMED FORCES MANAGEMENT

Have You Need For an Administrative Assistant?

ARMED FORCES MANAGEMENT deviates this month from its normal policy to announce the availability of an outstanding individual versed in administrative and management positions. This former Army officer should be a definite asset to your organization. Interested installations may send their requests to ARMED FORCES MANAGEMENT.

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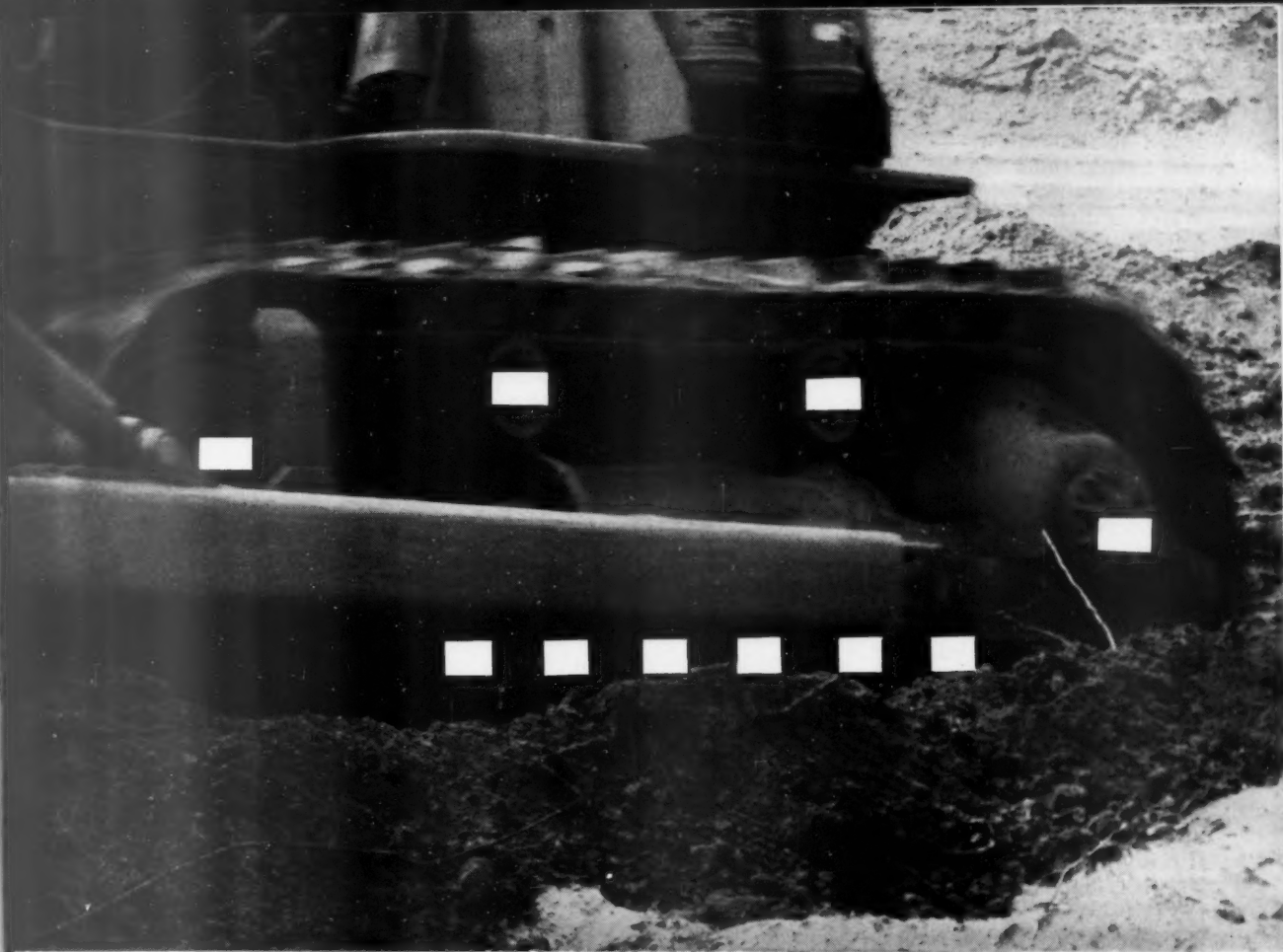
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Greasing time (av. conditions)	½ hr	1 hr
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PRODUCTION TIME GAINED ... 245 HOURS EVERY YEAR!		

ALLIS-CHALMERS

Engineering in Action

TAC. Three Strategic Air Command fighter wings will be transferred to Tactical Air Command next month. Units affected will be the 27th and 12th Strategic Fighter Wings at Bergstrom AFB, Texas, and the 506th Strategic Fighter Wing based at Tinker AFB, Oklahoma. The 27th will be redesignated as the 27th Fighter Bomber Wing and the 12th and 506th will be formed into day fighter units. Command jurisdiction of Bergstrom will be assumed by TAC on 1 July.

Nike Hercules Completing Tests. An improved version of the NIKE guided missile, recently designated as NIKE HERCULES, with nuclear capability and many times the destructive power of the original NIKE, is undergoing final tests.

Known as NIKE B during its development stage, NIKE HERCULES is substantially faster and has a much greater range than NIKE AJAX which has guarded key cities and strategic areas of the nation for the past three years. It is expected that the new missile will be in the hands of operational NIKE batteries around the country in the relatively near future.

Although longer, heavier and more than double the diameter of NIKE AJAX, the HERCULES model will have extreme maneuverability at altitudes far in excess of those capable of being reached by AJAX. Its higher velocity will permit swifter interception of the most advanced types of aircraft and its increased lethality will make NIKE HERCULES one of the most effective weapons in America's defense arsenal.

Certain modifications in existing ground control equipment makes it possible for NIKE HERCULES to be integrated into existing NIKE batteries throughout the nation. Both NIKE AJAX and NIKE HERCULES can then be fired with the same system. The equipment changes also add to the effectiveness of the NIKE AJAX.

Western Electric Company is prime contractor for NIKE HERCULES.

Research and development studies were begun on the improved version of NIKE in 1953 by the same Army-industry team

which assumed responsibility for the original NIKE missile. This included the U. S. Army Ordnance Corps, Bell Telephone Laboratories, Western Electric Company and Douglas Aircraft Company.

Army PCS Changes. Washington (ANS). Although the Army has placed limitations on permanent Change of Station moves resulting from the reorganization of divisions, it is taking positive action to keep personal inconvenience at a minimum.

A maximum effort is being made by the Army to use personnel in jobs as closely related to their Military Occupation Specialties as possible even though it is aware that there will be a grade and MOS imbalance during these division reorganizations.

To increase its combat effectiveness, the Army says it is reorganizing its divisions to cope with the possible atomic battlefields of the future. Every Army division will ultimately be "pentomic."

Navy Breaks Ground for \$38-Million Plant. Ground was broken recently for a 38-million dollar high energy fuel plant at Muskogee, Oklahoma, the Navy has announced. The plant, to be built and operated by the Callery Chemical Company, is designed to produce a new type of fuel developed under project "ZIP." When completed it will be the world's largest high-energy fuel plant.

Two More Army Divisions Reorganize. Two additional U. S. Army divisions, the 4th Armored at Fort Hood, Texas, and the 4th Infantry at Fort Lewis, Washington, began reorganization as atomic combat units April 1, 1957, the Department of the Army announced recently.

Army divisions which began reorganizing earlier this year to meet either the conditions of atomic war or those which would prevail under the threat of an atomic war are: the 25th Infantry Division in Hawaii; the 1st Armored Division at Fort Polk, Louisiana; the 1st Infantry Division at Fort Riley, Kansas and the 11th Airborne Division in Germany. The first to come into being under this program was

the 101st Airborne Division at Fort Campbell, Kentucky.

Within the next two years all the Army's divisions — Infantry, Armored, and Airborne—will have been tailored to fight wars in which atomic weapons have been introduced, while retaining the firepower and general effectiveness for successful non-atomic combat.

Contracting for Capehart Housing Resumed. The temporary order suspending further contracting for Capehart military family housing has been lifted. The suspension order, signed by Deputy Secretary of Defense Reuben B. Robertson, Jr., on February 28, 1957, was designed to slow down the present rate of contracting, pending a determination of priorities for projects not yet under contract.

Priority ratings, when established, will be applicable only to military family housing projects financed with Federal funds; projects for which private capital can be found will proceed without regard to priorities.

The temporary slow down was ordered in view of the difficulty in attracting long-range private investment capital in the present mortgage financing market. Mortgages on Capehart projects bear a 4 percent interest rate and have attracted few purchasers. As a result, construction of Capehart projects has depended largely upon advance commitment of Federal funds in the form of purchase commitments from the Federal National Mortgage Association.

General Luehmann New USAF ISO. Secretary of the Air Force Donald A. Quarles recently announced that Brig. Gen. Arno Leuhmann, USAF, has assumed the important post of Director of Information Services. The General has been in charge of Air Force recruiting activities and is well known to the press.

New Anti-Submarine Defense Command. Reorganization now underway of the fleet anti-submarine warfare forces was announced today by Admiral Jerauld Wright, USN, Commander-in-Chief, U. S. Atlantic Fleet. Expanding the responsibilities and
(Continued on page 44)

ON CAPITOL HILL

Inflation vs. Deflation

We would like to think that both Secretary of Defense Wilson and Budget Director Brundage have been reading the last several issues of ARMED FORCES MANAGEMENT. While this is, of course, possible, it is more likely that ARMED FORCES MANAGEMENT just hit the nail on the head in its analysis of the problems confronting any pay increases for military personnel or civil employees of the Government this year.

Mr. Brundage defined the issue succinctly in his letter to Secretary Wilson disapproving the Secretary's legislative proposals growing out of the Cordiner Committee recommendations. He said,

"Proposals for general adjustments in levels of compensation for members of the Uniformed Services must be weighed against the importance at this time of avoiding any additional inflationary pressures."

Mr. Cordiner took direct issue with him and expressed the opinion that the adoption of his recommendations would have a deflationary effect.

On May 8, at a formal and final meeting of the Cordiner Committee in Washington, its report was formally adopted and presented to the Secretary of Defense. The report consists of two volumes—the first relating to military personnel and the second to civilian personnel. Simultaneously, Secretary Wilson transmitted to the Congress legislation to provide "term retention contracts" for reserve officers and announced a program of administrative action to provide "proficiency pay" for selected enlisted personnel. These two actions appear to be all that can be taken to implement the Cordiner recommendations at the present time.

Mr. Wilson also stated that further study and developments of the overall Cordiner Committee program would be made a major Defense Department undertaking under the general responsibility of

the Assistant Secretary of Defense for Manpower, Personnel and Reserve, the Honorable William H. Francis, Jr. In the meantime, the initiation of action to obtain "term retention contracts" for reserve officers and to provide "proficiency pay" for enlisted personnel is consistent with the Cordiner recommendations and will give the Defense Department an opportunity to gain experience in the type of personnel procedures recommended by the Cordiner Committee. Some improvement in the personnel situation within all three armed services in these two areas also may be expected.

The term retention plan for reserve officers is designed primarily to encourage selected young reserve officers to remain on active duty after their normal three-year obligated term of service for a further limited period of time.

What's in the Plan

The Cordiner Committee found that one of the principal factors contributing toward reserve officers leaving the service, after the initial obligated tour of duty, was the fact that such officer had no assurance of continued employment until eligible for retirement. The proposed plan authorizes the extension of the contracts of two or more years' duration to reserve officers with at least two years active commissioned service, and provides "term retention pay" in the amount of two months pay for each year of contract service up to a maximum of two years pay. Thus, a reserve officer, under such contract, who was relieved from active duty after six years contract service would receive a year's pay upon leaving the service.

Budget Bureau approval of the plan was obtained, probably because of the fact that it contains no retroactive features with the result that no costs accrue until fiscal year 1960. Cost estimates are modest, indicating a cost of \$230,000 in FY 1960; \$6,909,700 in FY 1961 and \$5,575,950 in FY 1962.

Objections Cited

The plan in question should go far in meeting the requirements of the armed services for officers in the three to twelve year service bracket presently in short supply. It is probable, however, that it will not be endorsed enthusiastically by either regular or reserve groups. The regular officers are likely to object to the plan on the basis of the fact that reserves are being paid to remain in the service while the regular officer must remain in without special compensation or incentive. On the other hand, reserve officers can be expected to raise the old argument that the plan is evidence of the fact that the only interest of the armed services in reserve officers is in those of junior rank and that the higher grades go exclusively to regular personnel. It does not appear to ARMED FORCES MANAGEMENT that either of these arguments should prevail against the merits of the proposal.

Because of the fact that enlisted pay grades are not based on en-

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listed rank, administrative action is possible to increase the pay of selected enlisted personnel without promoting such persons in rank. Thus, a private may be authorized to receive the pay of any enlisted category from E-1 to E-6. Traditionally, of course, the services have associated pay to rank in enlisted grades, the pay of a private being either E-1 or E-2 and extending to E-6 in the grade of Master Sergeant. There appears to be no legal reason, however, why this is necessary. This feature has been utilized in the announced plan for "proficiency pay" for selected enlisted personnel. It is expected that the armed services will select approximately 15% of their total enlisted strength to receive such pay. Individuals selected on the basis of their proficiency or special technical skill will be paid at a rate one or two grades above the military rank. On this basis, qualified enlisted personnel will receive pay increases ranging from \$12 to \$50 per month.

Services to Absorb Cost

Present estimates indicate the plan to cost approximately \$49 million for the first year of operation, divided approximately: Army \$11 million; Navy \$15 million, Marine Corps \$4 million and Air Force \$19 million. This additional expense is to be absorbed by the several services in their presently proposed budgets for FY 1958. The services have agreed to such action as it is contemplated that, through the plan, they will be able to retain increased numbers of trained personnel thereby making possible savings both in personnel turnover and in the training establishment. It is further contemplated that the retention of additional trained personnel will permit operations with fewer total numbers without loss of combat effectiveness.

The plan in question is identical with the Cordiner Committee recommendations with the exception of the two additional enlisted pay grades (above the grade of E-6 recommended by the Cordiner Committee). These two additional pay grades were recommended by the Committee in order to apply the principle of "proficiency pay" to the grade of Master Sergeant or

Chief Petty Officer and requires legislation in order to implement it. As a result, the present plan can make no provision for "proficiency pay" of personnel in these grades.

It is encouraging to note that the Cordiner Committee recommendations as a whole have been adopted as a long-range objective of the Department of Defense and it is hoped that the Bureau of the Budget will see its way clear to approve further provisions for legislative implementation at an early date.

A political hassle of the first order already appears in the making over the Cordiner recommendations. Senators Symington and Goldwater have introduced the entire Cordiner plan—it is understood with the approval of the Senate Majority Leader, Senator Lyndon Johnson (Texas). Should the Senate Armed Services Committee hold hearing on the Symington-Goldwater bill, the possibility of acute political embarrassment for the Administration is apparent. Naturally, Mr. Cordiner will testify in favor of his entire proposal. The Secretary of Defense already has accepted the proposal in principle. The Bureau of the Budget is on record as rejecting the majority of the proposals in question because of inflationary aspects. Under these circumstances, the Administration would find itself in a position of opposing legislative action designed in the long run to save hundreds of millions of dollars and possibly eventually result in elimination of the necessity for the draft. This is almost too good an opportunity to embarrass the Administration for the Democrats to overlook.

Armed Services Committee Springs Into Action

On May second, the Senate Armed Services Committee favorably reported a bill to authorize the Secretary of Defense to lend certain equipment and services to the Boy Scouts of America for their Gold Rush 1957 Jamboree. Thus, after four months of inactivity, during which period not a single legislative meeting was held, the Committee sped into action to report a non-controversial, traditional bill which must have required five minutes consideration at the most.

New Idea Works At Fort Campbell

IMPROVEMENT: Accelerated Assignment of Replacement Personnel to Reduce Noneffective Time.

DATE INSTALLED: 1 July 1956.

PRIMARY PROGRAM AFFECTED: Manpower.

FIELD FOR EMPHASIS: Personnel Management.

BACKGROUND: A study was initiated in order to determine a method to reduce the noneffective time of enlisted personnel being assigned to Fort Campbell.

BEFORE IMPROVEMENT: Personnel arriving at this station were assigned to Receiving and Processing Detachment (3400), or Replacement Detachment, 187th RCT if Airborne. An average of 200 replacement personnel were processed each month, and remained in "intransit" status an average of 10 days while being processed and awaiting assignment.

AFTER IMPROVEMENT: An improved procedure was instituted whereby personnel assignments are determined upon receipt of orders prior to personnel actually reporting. Under this procedure, personnel reporting to Receiving and Processing Detachment (3400), or Replacement Detachment, 187th RCT, are given final processing and released to their unit of assignment within an average of 2 days.

GAINS: A reduction of noneffective time from 10 days to 2 days (average) with gains in productive manhours resulting in estimated annual benefits of \$230,400.

Research—Southern Exposure

Two new steps in the program for developing the finest engineering and scientific center in the South at Lockheed's Marietta plant: Architects' drawings on a new multi-million dollar engineering research center are due in early July. And, W. T. Shuler has joined the engineering division at Marietta as structural analysis engineer. Shuler was formerly with the Air Force and the Civil Aeronautics Administration.

FED under system came Service place ling in the pract through office tion viding mana perso polici cedur they presc Comm agenc Budg sion laws or est pract eral S mus The for th perso emple "com appo appoi ice." ● Ca those throu often tions. *CAR Branch tions Person

The Key to Federal Employment

● Applying for Federal employment can be a frustrating and confusing experience for those who do not know or understand how the system works. This can apply to all job seekers, but seems to be especially true for those of us who are eligible for Veterans preference.

● The brief definitions and explanations of practices and terms set forth here will help in understanding how Federal employees are hired. It will help the applicant understand what the personnel people are talking about.

By Carl T. Sieg

FEDERAL employment operates under what is known as a "merit" system. The Federal merit system came into being with the Civil Service Act of 1883. This Act placed responsibility for controlling and guiding the merit system in the Civil Service Commission. In practice, each Federal agency, through one or more personnel offices carries out the actual operation of hiring employees and providing personnel services to both management and employees. These personnel offices are bound by policies, regulations and procedures of the agency of which they are a part as well as those prescribed by the Civil Service Commission and other "control" agencies such as the Bureau of Budget. In addition, with each session of Congress more and more laws are being passed which affect or establish personnel management practices and policies in the Federal Service. The personnel offices must also comply with these laws.

There are terms you may meet for the first time when talking to personnel people about Federal employment. Some of these are "competitive service," "competitive appointment," "non-competitive appointment" and "excepted service."

● *Competitive service* constitutes those positions which are filled through the merit system. They are often called "Civil Service positions." The principle involved is

that applicants compete with one another for the job. The competition is through written examinations or through evaluation of the applicants' experience and training.

● *Competitive appointments or actions* are those resulting from the competition mentioned above. In other words, the appointment goes to one of those who competes for the job.

● *Non-competitive appointments or actions* are those made from among present or former Federal employees. These actions occur when jobs are filled by the promotion, reassignment, transfer or change to lower grade of a present employee. They also occur when eligible, former employees are re-hired (reinstated). These actions are called non-competitive because a current or former employee who meets the requirements for eligibility may be selected without regard to others. In other words, there need not be any competition among candidates or applicants who qualify.

● *Excepted Service* constitutes positions excluded from the competitive service by law, Executive Order issued by the President, or action of the Civil Service Commission. In some cases, such as the Federal Bureau of Investigation and the Atomic Energy Commission, all positions are "excepted" because the law establishing the agency excepted it from the competitive service.

Hence, they are not discussed in detail here. Briefly, they are excepted because there are very few positions of a given type to fill or

the qualifications needed are so unusual that it is impractical to hold Civil Service examinations for them. Appointment to excepted positions are made by the hiring agency which also determines the qualifications needed for the job.

Before we get into the types of appointments given and the ways in which people are selected for appointment we should look at the broad classification of jobs. This boils down to two.

● *"Class Act" positions* are those usually called "white collar" or "graded" jobs. In this broad category we find such positions as clerk, typist, administrator, engineer, doctor, personnel officer, and so forth. The salaries for these positions are set by Congress. Thus a "Class Act" position in one area at a certain grade will carry the same salary as another classified position at the same grade in another area. The grades for classified positions runs from 1 to 15. In addition, there are a small number of supergrades at grades 16, 17 and 18, and a small number of top paying technical and scientific positions authorized under Public Law 313.

● *Wage Board positions* are those usually called "blue collar" jobs. Here we find the laborers, mechanics and tradesmen. Salaries for these positions are based on the going rate for the area in which the job is located. Thus it is possible that two persons at the same wage board grade and doing the same job but in different cities can be paid different hourly rates.

So far we have covered the types of service and the broad classifications of positions as well as the general ways of filling competitive positions. Let's now get a little more specific on the latter and examine the types of appointments made. The important terms here are career appointment, career-conditional appointment, temporary appointment pending establishment of a register (TAPER) and temporary appointment.

● *Career-Conditional appointment* is given to persons who are

*CARL T. SIEG is Chief, Placement Branch, Placement & Employee Relations Divisions, Directorate of Civilian Personnel, Headquarters USAF.

appointed in regular order from a Civil Service examination. For the first year of such employment they serve a probational period. During this period they can be removed summarily for failure to perform their duties satisfactorily. After completing the probational period they have a right to certain advance notice with opportunity to reply to this notice (in other words, give their side of the story) before any adverse action such as removal, demotion or suspension affecting them is taken. After three years of satisfactory service their appointment becomes a

● *Career appointment.* This confers certain other benefits, for example, higher retention standing during a reduction in force.

● *Temporary appointments pending establishment of a register (TAPER)* of eligibles means just that. When the Civil Service office concerned has not held an examination for a specific job, or has not established a register of eligibles as a result of an examination, or has no eligibles available, it authorizes the hiring agency to make TAPER appointments. Although called Temporary these appointments are of indefinite duration and can continue until a register of eligibles is established (this process will be described below). These appointments do not confer any permanent type of Civil Service status. Persons with this type of appointment cannot be promoted and they have few retention rights in a reduction in force. In addition, at such time as an examination is held to cover the position persons with this type of appointment must compete. If they fail to qualify or obtain a low passing grade they are subject to displacement (termination of appointment) so that a person who passed with a high rating may be appointed.

● *Temporary appointments* are made for periods of less than one year. Persons with temporary appointments cannot be promoted, they have few retention rights in a reduction in force.

Now it may help to understand how one gets on a Civil Service register of eligibles as well as how appointments are made from the register.

There are three levels of Civil

Service Commission offices. *The Central office of the Commission in Washington, D. C.,* conducts examinations for positions in the Washington, D. C., Metropolitan area. It also conducts some nationwide examinations for positions of the white-collar type. *Eleven Civil Service regional offices* conduct examinations for certain positions within their regions. In addition, *local Boards of Civil Service Examiners* are located at the activity they service. (For example, most Air Force Bases have their own local boards.) The local Board examines for positions located at the activity they service. These include mechanical, trades, and laborer positions. They may also examine for other types of positions where their activity is the biggest user of the skill or where the skill is peculiar to their activity.

When examinations are to be held the examining office issues an announcement. This announcement contains information as to type, grade, salary, and location of the position; minimum qualifications needed to be rated eligible; when and where to file applications, papers or type of application forms to send; and whether the examination is assembled (written test required) or unassembled (no written test, rating on experience and training only). These announcements are sent to Post Offices in the area and to employment offices and various organizations. The forms needed to file for an examination can usually be obtained at any first or second class post office. General information on examinations currently open can be obtained at these post offices or by contacting the nearest Civil Service Regional Office.

After the closing date for filing applications, the examining office rates the applications. If a written test is given the test score usually determines the rating. Otherwise experience and training are evaluated and a rating assigned. By either means a numerical rating usually is given. Five points are added to a veteran's score, after he obtains a minimum eligible rating; ten points are added to the score of a veteran with a compensable disability after he obtains a minimum eligible rating.

Next, a register of eligibles is set up. This lists all eligibles in numerical order. For most jobs the ten point veteran, regardless of total score, goes to the top of the register. Other veterans and non-veterans take their regular order. In case of tie, the veteran is listed first.

When an agency desires to appoint to a position for which the register of eligibles is appropriate, certification of eligibles is requested. The Civil Service office or Local Board of Examiners then sends the agency the names of the people standing highest on the register at that time.

The agency makes selection from this list. In so doing, they must comply with the "rule of three" and Veterans' preference laws.

—Rule of three means that one of the three highest and available eligibles must be selected.

—Veterans' preference means that an available veteran cannot be by-passed to appoint a non-veteran *standing lower* on the list.

To summarize, you should keep in mind a few general rules relating to Federal employment. These emphasize some of the points brought out above. They will serve to dispel some of the misconceptions sometimes applied to the ins and outs of obtaining Federal employment.

The employing activity is free to determine whether it wants to fill a job through non-competitive means (promotion, transfer, etc.) or through competitive means (new hire).

The fact that an applicant is entitled to veterans' preference *does not mean that he is listed before all other candidates.* In most cases, those with compensable disabilities are: Those persons entitled to veterans' preference without disability get 5 points added to their score. Non-veterans with higher total ratings rank *above* non-disabled veterans with lower scores.

The employing activity can choose from among the highest three so long as veterans are not passed over to hire a lower standing non-veteran. A disabled veteran can be passed over to hire a lower standing non-disabled veteran only so long as the rule of three is not violated.

Now that we have covered the basic grounds regarding Federal employment, one more area should be explored. This has to do with employment limitations on retired personnel, especially those retired from the military services.

There are several laws which limit the money certain persons who have retired from a "uniformed service" can collect from the Federal Government.

An Act of 31 July 1894 says, "No person who holds an office the salary or annual compensation attached to which amounts to the sum of \$2500 shall be appointed to or hold any other office to which compensation is attached unless specifically heretofore or hereafter specially authorized thereto by law."

The Economy Act of 1932, as amended 15 July 1940 says that persons not subject to the provisions of the Act of 1894 cannot collect more than \$10,000 a year. In other words if retirement pay and salary add up to \$10,000.01 or more, something has to give. This can be done by having retirement pay decreased or stopped during the term of employment.

The restrictions mentioned above are part of the prohibitions on what is known as "dual employment." Simply stated this means that Congress does not want people to collect two government salaries at the same time.

Every person who has retired from a uniformed service should make sure of his, or her, status under these laws. It is difficult to cover all possibilities in a brief space. Some general guide lines are offered.

● **Safe Practice** is for each person collecting retired pay to check with the office making payments to learn what restrictions, if any, apply to him. In case of employment by a Federal agency this same office must be notified so that necessary reductions in retired pay are made. The responsibility for assuring that the law is complied with is that of the retired person. It cannot be passed on to someone else.

● **Uniformed service** mentioned above includes: Army, Navy, Air Force, Marine Corps, Coast Guard and Geodetic Survey and Public Health Service.

● The restrictions apply to the holding of two civilian positions or holding of a civilian position and the simultaneous receipt of pay from another office or position.

—**"Another office or position"** under the law can be the receipt of civilian or military retirement pay, social security benefits, disability compensation other than paid to disabled veterans through the veteran's administration or leave payments. The difficulty is that varying conditions cause different interpretations. It should be remembered that one does not have to be working on a job to fall under the term "another office or position." Receipt of pay is what governs.

● **Employment in a civilian position** with the Federal government is prohibited while on active duty with pay in military service. This does not apply, however, for short—15 days or less—tours for training purposes.

● **Disability retirements.** Persons of the military service who are retired for injuries received in battle or for injuries or incapacities incurred in the line of duty are not considered to "hold or have held" an office during such retirement under the Act of 1894. Retired enlisted men of the military services are also exempt. Under the "Economy Act" of 1932 any "regular or emergency commissioned officer retired for disability (1) incurred in combat with an enemy of the United States, or (2) caused by an instrumentality of war and incurred in line of duty during an enlistment or employment" is exempt from the requirements of that law.

As can be appreciated, it is difficult to generalize on the application of these "dual compensation" laws. Any person who is retired from a uniformed service should follow one simple rule before accepting Federal employment: Check with the office that sends him his retirement pay regarding any restrictions on his accepting such employment. It will be safer to make this check than to repay money illegally obtained. Besides, it's less painful.

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GE Gets Air Force Jet Engine Contract

A \$5,000,000 Air Force contract for the J79 jet engine program has been awarded the General Electric Company's Aircraft Gas Turbine Division it was announced recently.

The announcement was made by Maj. Gen. E. W. Rawlings, commander of the Air Material Command.

The contract applies to a continuing improvement program for the J79, which powers the Convair B-58 Hustler, the Air Force's first supersonic bomber, the Lockheed F-104A Starfighter, the world's fastest production fighter, and the Grumman F11F-1F Tiger fighter.

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ARMED FORCES MANAGEMENT ASSOCIATION

NEWS and ACTIVITIES

Improve Effectiveness

San Francisco Bay Area Chapter. President Donald Marcy reports two projects to improve Army Command Management effectiveness are under way in the Sixth Army.

The first is installation of mechanized accounting procedures at principal Sixth Army installations.

The second of the projects is providing a course of training in techniques of analysis, presentation of and the management uses of data with particular emphasis on that generated by the Army Command Management System. The first class completed the training course on 10 April. Acceptance and interest in the course by the first students was most gratifying. Colonel J. G. Ondrick (see cut), deputy chief of



Staff for administration and management, headquarters Sixth Army, introduced the course to the first class.

New Theme

Wiesbaden Chapter. To fight the daily paper work battle, this AFMA chapter has announced a new meeting theme—Better, Faster, and More Comprehensive Reading.

Two outstanding guests spoke at a recent meeting on this theme. One, General A. P. Clark, Chief of Staff, Headquarters USAFE, has held many positions in the Air Force where paper work was a continuous problem. He discussed the need for improved reading in the Air Force job today.

The other speaker is one of the Air Force's outstanding authorities

on reading improvement. He is Major Norman Goodwin who developed the reading laboratory from an idea to an operation which had over 3000 servicemen and civilians enrolled, in addition to some 200 government officials. Major Goodwin described the techniques used to improve an individual's speed reading. He also demonstrated some of the equipment used to train the eye and mind to act faster and retain more in reading.

Selling Ideas

Great Salt Lake Chapter. Dr. Preston Robinson was guest speaker at a recent meeting. Robinson, prominent author, professor, business consultant, and general manager of the Desert News-Telegram, addressed the chapter on the subject, "How to Sell Your Ideas."

It was revealed by the chapter that membership has now climbed to 52 persons, with the Utah General Depot scheduled to provide nine more before the next meeting.

Management in Modern Warfare

Far East Chapter. Major General Pierson, chief of staff, headquarters USAF Far East, covered the topic, "People, Pentana and Personnel Management," at a recent meeting.

Throughout his talk, General Pierson attempted to correlate use of good management practices as we know them today with the ever-increasing need to retain career personnel. Note was taken of the terrific importance now being placed on specialists in the technical fields. It was noted that, in addition to managing forces generally, there is the ever-present problem of management of time; that is, how to get done in a few minutes what used to take hours,

days, weeks, or months to accomplish.

Effective Work Simplification

New York Chapter. Speaker Frederic Erdman of the Home Life Insurance company addressed the chapter recently on an effective work simplification program. He discussed savings and improvements achieved in a long-range company-wide program. Development of a proper climate and the training and stimulation of participating employees was also covered. Erdman drew on his own experience in conducting work simplification for Home Life for his talk.

New Officers

Atlanta Chapter. Colonel W. C. Haneke, comptroller, headquarters Third Army, was elected president of the chapter at a recent meeting. At the meeting, attended by 75 members and guests, T. C. Tucker, customer relations manager of Southern Bell Telephone and Telegraph, presented a program on guided missiles and industry.

New Awards

Aberdeen Proving Ground Chapter. Members of AFMA who are presented one of the chapter's two annual awards will now receive a gold plated award pin, recently designed by Nick Albanese, chief of the ordnance school chart plate at Aberdeen.

The pin (see cut) shows the AFMA seal in the center topped with the name of the chapter making the presentation. On the bottom



of the pin will be the year of presentation.

The newly designed pin will be awarded to the members receiving either the Award for the Outstanding Professional Paper, or the Award for the Outstanding Implementation of Management Methods and Procedures.

Presentation of the Award for the Outstanding Professional Paper, awarded annually, is for the best presentation of some phase of Armed Forces Management, at either the National Headquarters or local level in AFMA. Presentation of the Award for Outstanding Implementation of Management Methods and Procedures, also awarded annually, is made to individuals or teams instrumental in initiating and implementing some aspect of scientific management at any echelon in the organization of any Armed Forces installation.

Third A-Sub Launched

The U. S. Navy's third nuclear-powered submarine, the Skate (SSN 578), smaller than the Nautilus and Seawolf, was launched May 16th at General Dynamics Corporation's Electric Boat Division, in Groton, Connecticut.

Sponsor of the newest addition to the Navy's underseas fission fleet was Mrs. Lewis L. Strauss of Washington, D. C., wife of the chairman of the U. S. Atomic Energy Commission.

The Skate's keel was laid on July 21, 1955, at the General Dynamics shipyard where the world's first two atomic ships were built. The atomic reactor for the Skate was being built by Westinghouse Electric Corporation.

To achieve the utmost result from mobility, the Army is now studying completely new types of organizations, looking toward much smaller combat teams of well integrated battle groups of all arms. These will be semi-independent and self-contained, capable of operating over extended distances on a fluid battlefield, yet constantly in contact, through various Army Signal Corps communications media, with adjacent and higher echelons.

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- Brews and dispenses either hot or iced tea automatically.
- Makes uniformly better tasting tea with full flavor.
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Automatic TeaMaker

Save time and labor with this new FMC Automatic TeaMaker . . . makes possible *push button servings* of either hot or iced tea. Always prepares a full-flavored, uniformly better tasting tea. Provides its own source of boiling water. Minimum counter space required.

NOTE: 1957 PRODUCTION OF THE TEAMAKER WILL BE LIMITED
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For more facts request No. 12 on reply card

Nautilus being refueled At Groton

The submarine NAUTILUS is being refueled at the Electric Boat Division of General Dynamics Corporation, Groton, Connecticut, after more than 60,000 miles of steaming, the Navy Department announced.

Refuelling the NAUTILUS involves replacing the submarine's nuclear reactor core, not merely inserting a new capsule of fuel. When the old core is removed, an entirely new heat generating machine is installed inside the empty steel container which remains. The new core will incorporate important technical advances which will greatly extend the fuel performance, as well as making it simpler, less expensive and more reliable. These engineering improvements have been undergoing tests at the Naval Reactor Facility at Idaho Falls, Idaho, for the past year. These tests included a 1600-hour full power run last summer by a core embodying the new features.

The NAUTILUS, the world first nuclear submarine, has been operating since January 17, 1955 when her skipper messaged "underway on nuclear power."

A conventional submarine of comparable size would have used an estimated 3,000,000 gallons of fuel oil — weighing 22,500,000 pounds and filling 300 tank cars—to travel the distance covered by the NAUTILUS. The NAUTILUS has consumed only a few pounds of uranium.

Ryan X-13 makes First flights

The U. S. Air Force's jet-powered vertical takeoff and landing research airplane, the Ryan X-13 Vertijet, accomplished its first complete flight sequences from vertical takeoff, transition to horizontal flight and return to vertical landing.

The flights were made at the Air Force flight test center at Edwards Air Force Base, where they culminated an 18-month flight test program.

Management Briefs from the Services

Detroit Arsenal Man Wins Suggestions Totaling \$1,755. During the last ten years as a refrigeration engineer at the Army's Detroit Arsenal, David Ormes has come up with suggestions that have saved the government \$726,000. His latest, dealing with efficiency of low temperature test cells, is estimated to save \$32,136, and won for Ormes a check in the amount of \$475.

40-Hour Course Given at Belvoir. A 40-hour course in Operations Research, a scientific method of meeting and solving management problems, was completed recently at the U. S. Army Engineer Research and Development Laboratories, Fort Belvoir, Virginia, as a part of the executive development program. The course was conducted by Case Institute of Technology under the direction of Dr. Russell Ackoff, Director of the OR Group at Case and currently president of the OR Society of America.

Atomic Sub "Skate" Launched in Connecticut. The world's third atomic submarine, the SKATE, was launched May 16th at General Dynamics Corporation's Electric Boat Division in Groton, Connecticut. Colorful ceremonies were attended by many dignitaries, and

concluded with the christening of the SKATE by Mrs. Lewis L. Strauss, the ship's sponsor and wife of the chairman of the U. S. Atomic Energy Commission. The SKATE will be skippered by Commander James F. Calvert, USN, a submarine officer since 1943.

Wright-Patterson AFB Saves \$100,000 From Suggestion. For designing a mechanical pressure transmitter for use in jet engine test cells, eliminating hazardous working conditions, James L. Heimrich, was recently presented with a check for \$500 by Major General William F. McKee, Vice Commander of AMC.

Colonel Charles P. Howe Named MAAG Chief in Ethiopia. Colonel Howe, who has been Executive Officer, Fort Sam Houston, Texas, since July, 1956, will succeed Colonel Edward S. Berry as Chief, Military Assistance Advisory Group, Ethiopia.

Camp Pendleton has new CG. Major General Riginald H. Ridgely, USMC, recently assumed command of Camp Pendleton, California. General Ridgely, a veteran of the defense of the Philippines, was until this assignment Commanding General of the 2nd Marine Division at Camp Lejeune.

Anti-Belly Flopping Idea Pays Off at SF Naval Shipyard. Everytime the dead-load unit, used to simulate a plane being fired from a carrier's catapult, shot off the carrier bow it belly-flopped into the water below damaging the dead-load's tires and wheels. George Vergez, Test Section Supervisor, suggested an air deflector be put on top of the dead load, and it now cleaves the water gracefully taking the impact on the nose. The new technique saves annually approximately \$17,000 and collected \$315 for George Vergez.

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JUNE

Overseas Look at Lockheed C-130. Ranking military and civilian officials of Latin American nations had their first look at the Air Force's new Lockheed C-130 Hercules during the Caribbean Command's "Exercise Carib-Ex" at Howard Air Force Base, Panama, Canal Zone. The six-mile-a-minute propjet combat transport was flown to Panama by a crew from the Tactical Air Command's 463rd Troop Carrier Wing, Ardmore AFB, Oklahoma.

Data Course in New York. The extremely successful course, Electronic Data Processing for Business and Industry, given last fall in New York and this year in Chicago by Canning, Sisson and Associates, are offering second session this year from July 22 through July 26 at the Hotel Roosevelt in New York City. Complete information on the 30-hour course is available from Canning, Sisson and Associates, 1140 South Robertson Boulevard, Los Angeles 35, California.

New Copters for MCAF New River, N. C. HMR (M)-461, commanded by Lt. Col. G. B. Doyle, USMC, is equipped with the new, giant twin-engine Sikorsky HR2S helicopters. The new squadron will be stationed at Camp Lejeune, North Carolina, and support operations of the 2nd Marine Division. The HR2S recently set a new speed and weight-lifting record, flying 162 miles an hour at 12,000 feet while carrying 11,500 pounds.

Army Completes Logex 57. One of the Army's largest peacetime logistical exercises involving more than 6,000 military personnel, ended on 18 May at Fort Lee, Virginia. Called LOGEX 57, the exercise was the ninth in a series to train student officers from the Army's technical and service schools, in operations required to keep troops supplied in combat.

SAC Pays Dollars for Improvements. The military awards committee at Offutt AFB and Hq SAC recently paid monetary awards to the following personnel:

M/Sgt. John G. Leger and S/Sgt. Alfred D. Reed, 3902d Periodic Maintenance Squadron, devised a rack on Coleman Aircraft Towing

Tractors to hold tow bars. Each received \$45 in cash for their idea.

T/Sgt. Charles R. Landes, Hq Sq Section, 3902d ABW, developed a Monthly Procurement Work Sheet for use in preparing AFPI Forms 1b and 3c. He received a total of \$50 dollars and a three-day pass for his suggestion.

M/Sgt. Roy M. Krogh, 3902d Transportation Sq., devised a simplified procedure for replacing tire chains and received cash awards totaling \$100.

T/Sgt. Charles G. Pike, 3902d Field Maintenance Sq., developed a new type splice for "rib lacing" on aircraft control surfaces and received \$100 dollars for his idea.

Carrier Saratoga Rejoins Atlantic Fleet. Fresh from the Naval Shipyard in Brooklyn where she received a complete overhaul, the SARATOGA has rejoined the Atlantic Fleet. The homeport of the world's largest carrier will be Mayport, Florida.

USAF's General Cecil Leads Management Round Table. General C. W. Cecil, Director of Air Force Management Analysis and three of his Division Chiefs last month served as a panel to present the subject of "Reporting to Top Management in the Air Force" at the Financial Management Round Table.

Clovis AF Group Wins Award. The 312th Fighter-Bomber Group at Clovis AFB, New Mexico, is the new possessor of the Air Force's coveted Flying Safety Award. The Group logged more than 7,000 flying hours without a major accident during the six-month period from June 30 to December 31, 1956.

NAS Alameda Worker Wins \$135. George M. Madison O&R Planning 500 Group, recently received a check for \$135 for his idea that bronze bushings used in the feathering mechanism of propellers be machined and a steel bushing installed. The idea will save more than \$4200 annually reported Captain J. L. Ewing, USN, O&R officer who made the presentation.

Army Chemical Corps Management Subcourse. An impressive list

of high-ranking officers, educators, and industrial and government leaders in the field of management recently converged at the Army Chemical Corps School, Fort McClellan, Alabama, as guest lecturers for the Management Subcourse, given in conjunction with the Eleventh Chemical Officers Advanced Course. The three-week Management Subcourse was attended by ninety persons.

Fort Gordon Gal Suggestor Hits Again. Miss Kay Daniels, a library assistant at the Signal Training Center, recently plucked her third suggestion check from Colonel Otto Saar, Commandant. Her latest idea dealt with an improved rearrangement of the Technical Library facilities.

ARNEB Returns After Long Cruise. The ARNEB (AKA 56) returned to her base at Norfolk Naval Station recently after a cruise which took her not only to the Antarctic but through three oceans and around the world. The ARNEB
(Continued on page 44)

PRODUC-TROL
Visual Control
not only schedules,
But automatically checks
with TIME, LINE
and COLOR control



- Original cost and upkeep low.
- Schedules and time checks operations.
- Historical record to back it up.
- Bad situations show automatically.
- Its simplicity has put it into world-wide use.
- Analyze 100 items in 10 seconds.

Effective Tools for Effective Management

WASSELL ORGANIZATION, INC

Westport, Conn.

For more facts request No. 30 on reply card

NEW Dollar-Saving Products

GRINDING WHEEL SAVINGS

Koebel Diamond Tool Co. A new process which permits complete automation of grinders and eliminates all lost production time for wheel dressing has been announced by this firm. CDP (cemented diamond particles) cutters developed by Koebel permit such rapid forming of grinding wheels that the purchase and stocking of preformed wheels for different form-grinding operations is no longer required. Shaping of wheels for form grinding, which now takes anywhere from an hour to several hours, can be done in a matter of minutes with the new CDP cutters in combination with suitable mechanisms developed by Jones & Lamson, Springfield, Vt.

For more facts request No. 1 on reply card

THERMOPILE CONVERTERS

Jarrell-Ash Com. A 12-page brochure is available describing the Hilger-Schwarz Thermopiles manufactured by Hilger & Watts, Ltd., London, England. Jarrell-Ash has the exclusive distributorship on the equipment, being introduced in the U.S. for the first time. Hilger-Schwarz Thermopiles are produced in both vacuum sealed and air types, and are available with a choice of four window materials—glass, quartz, fluorite or potassium bromide. Leading features include

an extremely short time constant—only five milliseconds—which results in a desirable simplification of amplification electronics.

For more facts request No. 2 on reply card

HUMIDITY TEST CHAMBERS

Environmental Equipment Corp. Literature is available on a new humidity test chamber, Model H8, on which performance has been so outstanding the firm claims to specify control tolerance of better than two degrees plus or minus F over a range of 0 to 200 degrees F. Controls include 12" diameter wet and dry bulb recorder, controller, programmer, and the unit has a test volume of eight cubic feet.

For more facts request No. 3 on reply card

FILM PROCESSING MACHINE

Houston Fearless Co. A new compact, high speed spray processor has been developed by this firm. The Houston Fearless 16/-35MM Spray Processing Machine Model S120PN is the most compact unit ever developed for speed processing and impingement drying at such high rates. 16MM and 35MM positive film processing is achieved at a rate up to 150 feet per minute. Negative 16MM and 35MM film can be turned out at a speed of 100 feet per minute, the dry to dry cycle taking less than five minutes.

For more facts request No. 4 on reply card

NEW UNIVERSAL POTENTIOMETER

Allegany Instrument Company, Inc. The ALINCO Model P-55 is a small, lightweight potentiometer and millivolt source in one instrument. Designed for precisely the conditions encountered in the field and in the laboratory, the P-55 can be used with ANY thermocouple, or to measure any potential in the 0 to 55 mv. range. Genuinely portable and extremely rugged, the P-55's small size and weight has been achieved at no sacrifice in accuracy, which is guaranteed by ALINCO to be one tenth of one per cent of full scale.

For more facts request No. 5 on reply card

TRACTOR STEERING SYSTEM

J. I. Case Co. An improved type of controlled differential steering for all TerraTrac crawler tractor models with standard-shift transmissions has been announced. According to company engineers, the new steering system gives greater maneuverability and easier handling, yet keeps power and traction on both tracks while turning. Increased leverage, plus new heavy-duty brake drum with heavier brake band and lining, enable the operator to make sharper, almost effortless turns without clutching.

For more facts request No. 6 on reply card

HYDRAFORK TRUCK ATTACHMENTS

Lewis-Shepard Products, Inc. The Lewis-Shepard line of riding-type electric tiering trucks is now available with a HydraFork attachment to further facilitate use of the trucks in extremely narrow aisles (see cut). To pick up a palletized



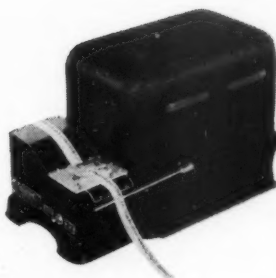
As a service to OPERATING DEPARTMENTS and PURCHASING OFFICERS, ARMED FORCES MANAGEMENT will provide you with a selected list of manufacturers' products. Claims presented are those of the supplier and not necessarily of this publication

How to Use Armed Forces Management's Library—

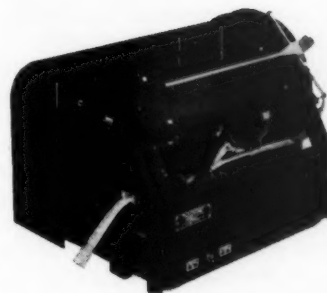
Inserted in this issue, a postage free card is provided for your convenience in requesting descriptive and informative literature. This will be forwarded to you, without obligation. Many cost saving ideas are generated by Operating Departments that have referenced information on products available. Purchasing Officials will find this type of information invaluable. All that need be done is: fill in name and address, circle that which will assist you, and drop in the mail.



PAGE PRINTER



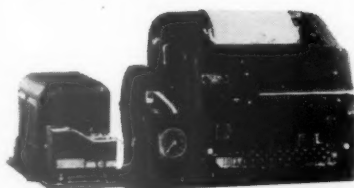
TAPE TRANSMITTER DISTRIBUTOR



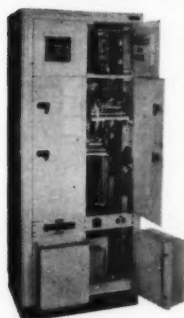
TYPING REPERFORATOR

TELETYPE EQUIPMENT MEETS THE GROWING DEMAND FOR PRINTED COMMUNICATIONS

Send-Receive Printer, Tape Transmitter Distributor, Keyboard Tape Perforator

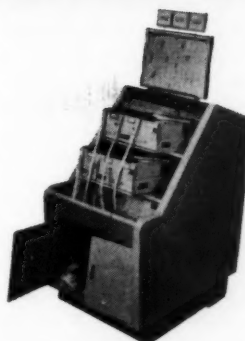


COMPOSITE SET



Receiver Cabinet

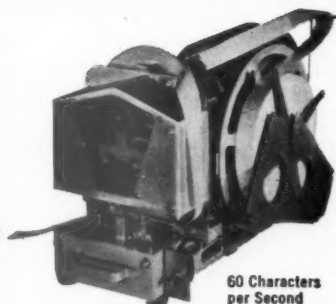
"TORN-TAPE" RELAY EQUIPMENT



Transmitter Cabinet

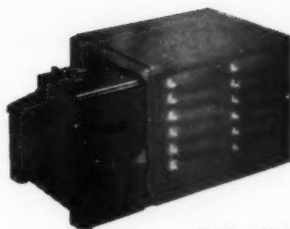
"TORN-TAPE" RELAY EQUIPMENT

TELETYPE EQUIPMENT MEETS THE GROWING DEMAND FOR PRINTED COMMUNICATIONS



60 Characters per Second

HIGH SPEED TAPE PUNCH



Single or Double Tape Gate

HIGH SPEED TAPE READER

A new issue of the booklet "The ABC's of TELETYPE Equipment" is available upon request. Write to:
Teletype Corporation, Dept. AF6
Sales and Merchandising
4100 Fullerton Avenue, Chicago 39, Illinois



TELETYPE CORPORATION

Western Electric Company

For more facts request No. 28 on reply card

load from the floor or a storage rack, the operator of the HydraFork-equipped truck simply hydraulically extends the forks into the pallet. Next, the load is lifted over the load wheels, and forks and load are retracted into the truck. Method is reversed for storing loads away. Because of this feature a HydraFork narrow-aisle truck can pickup and deposit loads in aisles only as wide as the length of the truck and its forks. It needs no extra space for maneuvering.

For more facts request No. 7 on reply card

CONVEYOR BELT COOLER

Dean Products, Inc. The Dean Thermo-Panel Coil division has come up with a possible solution to the evenly-distributed-temperature problem in traveling conveyor belt heating or cooling. Made up principally of standard thermopanel, the Dean development needs no special jacket or sheet metal outer duct. The Dean Thermo-Panel Coil takes the place of both the sheet metal and old-style pipe coils. The cost is usually considerably less, the weight less and installation is simpler.

For more facts request No. 8 on reply card

SHOULDER HARNESS

The Essig Co. The first shoulder harness inertia reel designed to be mounted on the seat headrest, the Harman reel is now in widespread military use. It provides quick, reliable, automatic locking for maximum protection of pilots and aircrew, yet allows ample freedom of movement. It is the lightest reel made, weighing approximately 16 ounces.

For more facts request No. 9 on reply card

ELECTRIC POWER CARRIER

Borne Company, Inc. A new compact electric unit has been developed to power any type of wheeled cart or truck that is now manually operated. Teamed with hand trucks it provides a safe, motorized carrier for tools, parts and a variety of other items requiring transportation in plants, terminals, warehouses, etc. Called Electromite-M1, it is noiseless, free of gas fumes, and poses no fire hazard, is inexpensive to run and requires little maintenance. A built-in charger plugs into any 110 volt

AC socket, shuts off automatically when the charging cycle is completed. High torque range will pull 1000 lbs. up all normal ramps.

For more facts request No. 10 on reply card.

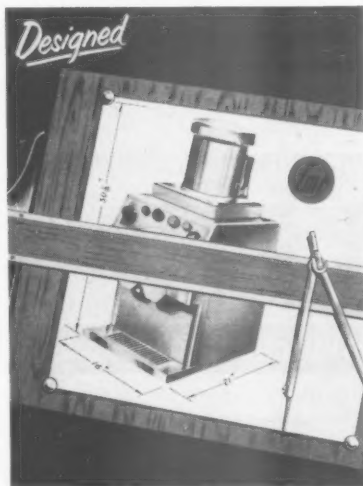
SELF LEVELING ATTACHMENT

David White Instrument Co. This firm has just introduced to engineers and contractors a simple, time-saving attachment that automatically provides and maintains a level or horizontal optical line of sight. The new device, when attached to a surveying instrument affords the accuracy of a second order instrument. The small and compact instrument can be attached, by an adapter, to the objective end of a telescope of any make level or transit, insures unfailing accuracy, even when readings are taken with an unlevel instrument.

For more facts request No. 11 on reply card

NEW AUTOMATIC TEA MAKER

Food Machinery and Chemical Corp. A four-page brochure (see cut) has just been released announcing the FMC automatic tea



maker, first machine to brew and dispense hot or iced tea automatically. The bulletin, KB-571, is titled "Designed to Pour More Profits in Tea Serving" and contains brewing and serving capacities as well as the machine's operation and the experience of test users.

For more facts request No. 12 on reply card

MAGNETIC TAPE HOUSING

Remington Rand. The increased

use of electronic computers has made magnetic tape an everyday tool. For perfect performance at all times, it is essential that magnetic tape be carefully and properly housed. Remington Rand's new Mobile Magnetic Tape Truck does triple duty in this respect. It's light enough for easy removal from storage to point-of-use, yet engineered to provide filing-case accessibility plus maximum protection. A booklet describing all its advantages is available, code number LBV-738.

For more facts request No. 13 on reply card

SAFETY SPECTACLES

General Scientific Equipment Co. New lightweight safety spectacles which may be used for semi-hazardous operations as well as for protection of installation visitors have been announced by this firm (see cut). Spectacle lenses, either clear



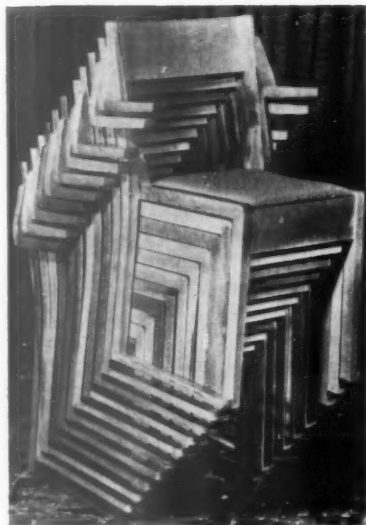
or dark green, are molded of .060" thick, impact-resistant plastic having excellent optical qualities. Frames will fit any face with minimum adjustment—no need to stock more than one standard size. Ideal for light grinding, spot welding, laboratory and other similar light-hazard uses.

For more facts request No. 14 on reply card

"NESTING" CHAIR

Raylen Manufacturing Co. After three years of consistent experimenting, the Raylen "Nesting" chair is in production. Designed and later named for its ability to stack or "nest" (see cut) with over 100% more space saving convenience, the "Nester" retains desired features generally sacrificed by other chairs of this type. Two styles

ARMED FORCES MANAGEMENT



FILING CABINETS

Wassell Organizations, Inc. Cut your office force filing time in half, save up to 40% in space with Corres-File. Revolutionary filing equipment takes your file clerk out of the laboring class and saves you 50 cents of every dollar you now spend.

For more facts request No. 18 on reply card

VISUAL MANAGEMENT CONTROL

Graphic Systems. This New York firm invites men interested in efficient management to get things done with Boardmaster Visual control which gives a graphic picture of operations, spotlighted in color, saves time, money, and stops errors.

For more facts request No. 19 on reply card

BELCO REPLACEMENT FAUCET STEMS

Miller Manufacturing Company. Leaking compression type faucets, lost water and excessive maintenance costs are gone forever with the installation of Belco ball bearing replacement stems, complete with bibb washers. The bibb washer is only under compression and is not subject to cutting or grinding action.

For more facts request No. 20 on reply card

COMMON STOCK INVESTMENT

Hamilton Management Corp. Through Hamilton Funds, Inc., a managed common stock investment fund, this firm offers lump sum or monthly investment plans to fit any budget. Interested persons can inquire without obligation. Firm recently declared another quarterly dividend.

For more facts request No. 21 on reply card

INCOME FUND

The Keystone Company. This leading eastern investment firm offers Series K-2, a diversified investment in securities selected for future income.

For more facts request No. 22 on reply card

DRAWER COMPARTMENTS

Equipto Div., Aurora Equipment Co. Up to 6,184 drawer compartments in only three square feet of floor space can be accomplished for your command.

For more facts request No. 23 on reply card

PREFABRICATED INSULATED PIPING SYSTEMS

Ric-wil, Inc. In addition to quality piping systems of exceptionally high thermal efficiency, this firm prides itself in on-time delivery to meet piping construction schedules. Write for the new Ric-wil catalog.

For more facts request No. 24 on reply card

DATA PROCESSING

Wassell Organization, Inc. A revolutionary data processing visible master card or tape unit is available from this firm, a leader in providing effective tools for effective management. Find out why you should be using it, too.

For more facts request No. 25 on reply card

FREE FIR PLYWOOD PURCHASING GUIDE

Douglas Fir Plywood Assoc. A handsome wall hanger containing handy fir plywood grade-use-specification guide is free to anyone in your firm who specifies fir plywood. Also available is a specification portfolio giving detailed plywood (Please turn to p. 44)

are available, with or without arm rests; either type, mixed or separate, stack 25 high on a "dolly" and will easily clear the standard 6' 8" doorway. This chair will actually "nest" safely to ceiling heights.

For more facts request No. 15 on reply card

COUNTER-TIMER

Hupp InstruMation Co. This firm announces its all new Model 400 Counter-Timer; an ultra-compact, five-decade electronic counter with response from 1 cps to beyond 100 kc. High-speed glow tube decades and unique gate control and decade drive circuitry produce exceptional performance and reliability in a package less than 1/2 cubic foot. The Hupp Model 400 measures frequency, period, time interval, and a ten-period average using a crystal-stabilized clock source having a maximum error of 0.001 per cent.

For more facts request No. 16 on reply card

NEW RUNWAY CONTROL SYSTEM

Wickes Engineering & Construction Co. A newly developed mobile "safety watch" unit has been introduced by this firm to meet the need for runway control equipment for jet aircraft. With longer runway lengths and higher jet landing speeds, pilot and passenger safety makes the need for such auxiliary control units more essential than ever before. Supplied standard with wheels for fast and ready mobility, a single "safety watch" can serve even the large airfields—handling several runways as landing conditions change.

For more facts request No. 17 on reply card

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For more facts request No. 29 on reply card

descriptions, etc. Offer good in USA only.

For more facts request No. 26 on reply card

VISIBLE EQUIPMENT

Wassell Organization, Inc. There are 16 good reasons why you should be cutting costs and speeding efficiency with Sig-Na-Lok.

For more facts request No. 27 on reply card

TELETYPE EQUIPMENT

Teletype Corporation. This firm's equipment meets today's growing demand for printed communication. A new issue of the booklet, "The ABC's of Teletype Equipment" is available upon request.

For more facts request No. 28 on reply card

VU-BOARD

Wassell Organization, Inc. To spot and prevent trouble in your organization, find out about this new, low cost, unlimited visual control board.

For more facts request No. 29 on reply card

VISUAL CONTROL BOARD

Wassell Organization, Inc. Production not only schedules but automatically checks with time, line, and color control, has low original and upkeep cost.

For more facts request No. 30 on reply card

Turboboxcar to go in production

Fairchild Engine and Airplane Corporation has disclosed that a go-ahead had been given for prototype production of a four-engine turboprop transport to be known as the Turboboxcar.

R. S. Boutelle, Fairchild President, said the new plane will fly in mid-1958, after a meeting with S. B. Withington, President of Lycoming Division of AVCO, and Anselm Franz, Lycoming Vice President, at which agreement was reached for delivery of the new Lycoming T-55 engines early in 1958.

"Engineering of the new airplane has paralleled development of the T-55, and this will permit a transition economical to the government and make possible early delivery of production airplanes to the military services," Boutelle said.

"The Turboboxcar will have a take-off gross weight of 75,000 pounds.

Washington Management

(Continued from page 30)

tasks of the present anti-submarine force of the Atlantic Fleet, the new command will be known as the Anti-Submarine Defense Force, U. S. Atlantic Fleet, and is headed by Vice Admiral Frank T. Watkins, USN.

Army to Use Fort Gordon for Trainees. Secretary of the Army Wilber M. Brucker has announced that Fort Gordon, Georgia, will be used as a basic combat training center for Active Army trainees to meet additional requirements created by tremendous response to the Army's program of six-month training for the Reserve Components.

A total of 35,145 young men have enlisted and entered the six months' training program between October, 1955, and January, 1957, through the U. S. Army Reserve and National Guard. In the past three months approximately 7,000 have entered the program, including more than 3,900 during February.

Secretary Brucker said active Army trainees will be phased into Fort Gordon beginning in May. The program being conducted for six month trainees at Fort Dix, New Jersey; Fort Knox, Kentucky; Fort Jackson, South Carolina; Fort Leonard Wood, Missouri; Fort Chaffee, Arkansas, and Fort Ord, California, will continue to be carried out at those installations.

General Bryan USA to CG First Army. Lt. Gen. B. M. Bryan, Jr., USA, Commanding General, U. S. Army Pacific, will assume command of the First U. S. Army, Governors Island, New York, upon the retirement of Lt. Gen. Herren effective 31 July, after more than 39 years of service.

● Boss and stenographer classes help improve letter writing at H. J. Heinz Co. Enrollment in course, sponsored by personnel division, comprises men whose duties require much correspondence and their secretaries. Bosses and secretaries meet separately, but their courses are complementary. *Industrial Relations News* 3-3-56.

Bendix-Scintilla Announces Major Building program

A \$5,000,000 plant-expansion program, scheduled for completion in stages by 1961, has been announced by George E. Steiner, general manager of the Scintilla division of Bendix Aviation Corporation.

He said the building program "is the largest single expansion of plant facilities in the history of the division," which produces a wide range of ignition products and electrical connectors for the aviation, automotive and commercial fields. It will add about 200,000 square feet to the present 560,000 square feet of plant space.

In addition, he forecast an increase in employment of about 20 per cent by 1961. Scintilla now has 4,800 employees.

Management Briefs

(Continued from page 39)

was the only Atlantic Amphibious Force vessel to participate in Operation Deefreeze II, and departed from Norfolk in November 1956.

Work Simplification Pays-Off at Fort Benning. Thirty-five Fort Benning servicemen and civilian employees were recently presented Work Simplification Certificates in the continuing classes conducted for management improvements. Brigadier General James V. Thompson, deputy commanding general of the U. S. Army Infantry Center, said in awarding the citations, "Forty-three thousand dollars were saved last year by adopting the suggestions of last year's work simplification classes."

Vehicle Utilization at a Glance. CWO George S. Wolstencroft, USAF, Dow Air Force Base, Maine, recently invented a vehicle utilization chart now a part of each SAC installation. The new chart is estimated to save an average of 42 man-hours at each installation, and gives at a glance, the utilization picture on each vehicle.

Big Cash Award. John J. Offenlock of the White Sands Signal

Corps Agency Maintenance Shop recently pocketed \$130 for his suggestion involving a new radar repair tool which will save an estimated \$4,200 annually. The award was made by the Commanding General and Irving P. Moran, Ofenloch's supervisor.

If you're looking for the "hot-test" Combat Air Crewman training program in the Fleet, you'll do well to look in on VQ-1 at Iwakuni, Japan, which operates as a unit in the Seventh Fleet.

From CNO requirements for CAC designation, the P4M and A3D patrol squadron developed a 37-period syllabus, fashioned a five-color CAC certificate and purchased CAC wings to present to qualified crewmen.

Seven men finished the syllabus and qualified in time for the C.O.'s

inspection on 2 November and nine others were ready by 16 November. Ten men were rapidly progressing for designation by 14 December and ten more expected to complete requirements by Christmas.

Periods of instruction covering aircraft recognition, code, survival, ordnance, radar and plane captain procedures are scheduled on the Squadron Plan of the Day with officers and qualified combat air crewmen serving as instructors. "Classes" are held wherever the type of training can best be taught. Survival procedures in the water call for a few hours wrestling with "poopey suits" and liferafts in the Station pool. The code practice facilities of FASRON 120 are used and Squadron spaces furnish classrooms for A/C recognition and other lectures. On-the-job training

in the hangar and out on the line provide other classrooms while regular training flights are used to great advantage in putting crewmen through actual practice of required skills.

The goal of VQ-1's CAC training program is to make every man in every crew qualified according to CNO standards and, at the present rate, the goal will be realized as VQ-1 pushes its program to produce the best Combat Air Crewmen in the Fleet.

Suggestions Save WVMD \$38,000. Sharp suggestions from West Virginia Military District personnel have saved an estimated \$38,000 in the past three years. Bargain prices for the suggestions too—only \$600 in cash awards were made to the 18 civilian and soldier participants.



Book Reviews

by D. D. Corrigan

The Newest Trends

"FACTORS IN EFFECTIVE ADMINISTRATION," by Charles E. Summer, Jr. (Graduate School of Business, Columbia University, 286 pages, \$3.25).

Once upon a time there was a man who thought that he and he

alone with his own two hands had built the organization. He firmly believed that "trial and error" are the best ways of learning by experience, and that good old common sense had led a man like himself toward achieving the proper goal. He knew his product, the

buildings, and the equipment like the back of his hand, and he considered good administration practice was for him to directly supervise every decision and action.

He did not consider training as being any different than education. Study and knowledge were a good thing to have in your background, he felt, but a man either has the know-how or not. Efficiency and technology were the two most important words in his vocabulary, and they influenced his every decision. He did not believe in spending time and money on new methods and modern ideas. The old ways had always worked, and he had no time to waste.

This man belongs only in a fairy tale, for he is not realistic and is not aware of what is going on in the business world today. He should have read, "Factors in Effective Administration," for it was written for one good reason—to give attention to the effectiveness of administration by determining what it takes to be a good administrator.

Eighty-seven courses in administration were selected for study in the preparation of this survey. Teachers from twenty universities combined their thinking. Most of these men have had consulting experience in the world of practical affairs, and some have held executive positions in business organizations.

Selected Check

List of Outstanding Books on Management

This check list is provided for our readers as a reminder of the current literature on management. These selections are the most useful and informative books on all phases of management. Any of these books may be purchased through Armed Forces Management Book Service. See Book Reviews for order coupon.

How to Interview by Walter Van Dyke Bingham and Bruce V. Moore. Again this standard work, the only one devoted exclusively to effective interviewing techniques, has been brought up to date to meet continued demand. Here is specific help for interviewers in every field. \$3.50

Manpower in the United States: Problems and Policies. Edited by Haber, Harbison, Klein and Palmer. This book

is at once a presentation of some of the problems involved in working toward the goal of utilizing labor power for maximum productivity, and a statement of some of the possible and desirable public policies for their solution. The work of more than twenty authorities in the field, this volume will be an invaluable source of reference and study for personnel executives, relations consultants and government officials. \$3.00

Communication Within Industry by Raymond W. Peters. Here is new light on one of the major objectives of personnel administration today: how to keep employees better informed on what they want and need to know about company policies, plans and policies. The book affirms the importance of good communication in improving employee efficiency and morale, and provides a manual of tested procedures that can be effectively applied in any business. \$3.00

It was found that there are three main factors that must be considered for good administration. These are the knowledge factor, the attitude factor, and the ability factor. An understanding of these three factors will accomplish the purposes of helping management, aiding training and education facilities, and giving specific help to enable a person to acquire these factors that are basic for good administration.

The knowledge factor is translated to mean knowing the functions of the administrator and having an integrated functional viewpoint along with an understanding of organization behavior. Sound knowledge is desirable in the fields of human relations and underlying economic factors regarding philosophical and moral

concepts. Also methods of decision-making and quantitative approaches were felt to be the kind of knowledge basic for a good administrator.

The importance of attitudes in administration is because of their effect on thinking and action. Attitudes are defined as being "beliefs, predispositions, feelings, desires, or values which are held by individuals." These are based on the emotions and feelings of each person individually.

Ability or intuition studies include skill, art, judgment, and wisdom and are interpreted into abilities of decision-making, human relations and other abilities of administration.

About one-third of the book is devoted to Sample Interview Reports. These are actual interviews with teachers and give, course by course, a description of the general objectives of the course as taught by the teacher, with emphasis on the knowledge, skill and attitude factor.

The combined thinking of these many specialists who contributed to this book adapts the newest trends into practical advantages to form a broad and concise pattern. "Factors in Effective Administration," is a book for thought and contemplation as well as application.

What Is Manufacturing?

"MODERN MANUFACTURING PROCESSES," by Joe L. Morris (Prentice-Hall, 533 pages, \$9.35).

Joe L. Morris has had many years in the metallurgical field and he explains the process of manufacturing as, "Generally, manufacturing is considered to be the repeated production of items, parts, units, or assemblies that have commercially exact size, shape, appearance, and quality. This method of making items or products used in everyday living is claimed to be an out-growth of American ingenuity and need. Fulfillment of consumer demand by large-scale manufacturing has led to higher wage scales and salaries—higher standards of living resulting therefrom and superior qualities and appearance in the items made."

With this definition in mind and the interpretation of the accom-

plishments of manufacturing, Mr. Morris gives the chronological sequence of steps necessary for the processing of commercial metals and plastics. Every step is fully described, with diagrams and illustrations when needed, and an evaluation is given of each process as to the importance in today's modern industrial program.

The chapter on the development of iron and steel products starts with the fundamentals and explains how raw materials are refined with basic explanations of the furnaces used. Foundry practices takes the process one step further by showing types of molding and how metals are given their initial shapes by casting methods. More information is specifically given on the working of metals as to heat treatments, testing of engineering materials, welding processes and applications.

The sections on equipment covers the lathe, turret lathes and screw machines, automatic and semi-automatic turning machines, and drilling and milling machines. The next portion of the book concerns shapers and planers, threading, sawing, broaching, gears and gear making. Processing takes up abrasive processes, types and uses of presses.

Industrial inspection, by the use of gages, determines in advance whether or not the parts are fitted for the intended use. The final chapter on this phase of manufacturing, gaging and inspections, concludes very satisfactorily the last step in this complete and clear picture of modern processes of manufacturing.

Handbook-Workbook

"MASTERING AMERICAN ENGLISH," by Hayden, Pilgrim and Haggard (Prentice-Hall, 260 pages, \$3.50).

The man was mad and he spoke firmly to his employer, "What do you think you are? I'd like to know, who did you see that said my English wasn't always correct? I close quickly any book on grammar. And I resent your implications. I got your last crack that really got my temper up. Then this here book arrived. Yesterday I received it. I am working for you in your office for nine and a half

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years now and I always thought my work was satisfactory. You tell me what's up."

The employer smiled patiently and explained, "I'm sorry if I hurt your feelings, but in your statement just now you made at least one grammatical error in every sentence, which proves my point. This is nothing personal, I want everyone in the office to read this book as a refresher in the use of correct English. Did you ever stop to think that the main thing people judge you by is how you talk, whether orally or in a letter? Ponder that thought for a minute."

He went on, "People form opinions of strangers quickly, and the best and fastest way is not by appearance or poise, but how they speak, how they get their ideas across to someone else. This book, 'Mastering American English,' is a good basic handbook-workbook on essentials of the English language. I want you and everyone in this office to read it. It's short, easy to read, clear and concise. The book is intended for adults in order to develop fluency and accuracy."

The Latest Word

"BAUGHMAN'S AVIATION DICTIONARY AND REFERENCE GUIDE," Revised by Ernest J. Gentle & Charles E. Chapel (Aero, 653 pages, \$7.50).

It is an understatement to call this book a dictionary, for encyclopaedia would be a better term. This is as complete a publication as I have ever seen on all phases of aviation, and will be a valuable reference source on aviation material.

The new developments in the aviation industry in the last few years has made it necessary to revise and modernize this standard reference guide. Basic information has been brought up-to-date, new subjects have been introduced, and many general technical terms have been added to this edition.

The first section is the dictionary and includes definitions, abbreviations and new definitions. This introduces in the last group; atomic energy, electronics, guided missiles, helicopters, jet aircraft, meteorology, ordnance, radar, rockets and television.

The last half of the book is de-

voted to a reference guide. Radar Information does not tell all the technical details, but gives a good general picture "of the methods of operation, accuracy, and dependability of such apparatus now being installed in key locations throughout the country." Illustrated Nomenclature comes next, followed by Useful Tables, Weather Information, and Radio Range Orientation.

Preliminary Design considerations "is presented for the express purpose of familiarizing the reader with the basic design procedure followed by any man or group of men responsible for the development stage of engineering an airplane." More specific data is given in chapters titled: Primary Stress Analysis, General Structural Symbols & Formulae, Specifications, Materials, Material Design Standards. Such items as Drafting, Drill Sizes, Standard Holes, Fits, Lofting, Shop Mechanics receive considerable attention. The last chapter is on Safety Rules and discusses with sound reasoning and good advice, rules for factory and shop dealing with safety.

It would seem that "Aviation Dictionary and Reference Guide," should be a "must" for anyone concerned with aviation today.

Field Notebook

"JUNIOR LEADER'S FIELD NOTEBOOK," (Military Service Publishing, 96 pages, \$2.00).

"Junior Leader's Field Notebook" was published as a result of requests from the field for a handy reference notebook. The material was compiled by a staff of infantry experts and is complete and up-to-the-moment. It is designed to assist leaders and prospective leaders of small units. The content is both tactical and logistical.

When in the field, especially under the stress of a tactical situation, a leader might be unable to recall everything he has been taught or under the strain may overlook vital procedural steps. In many instances the exigencies of the situation may cause him to assume a position for which he has not yet been trained. In any case, he needs brief reference material to guide him. The infantry leader or small unit commander cannot

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carry a "five-foot-shelf" of field manuals—what he needs he must carry in his pocket. This field notebook has been compiled with these requirements in mind and provides the necessary information in a condensed, yet easy to read form. The memo pad of notesheets attached to the back cover is of standard size and may be refilled easily.

Much vital information is contained in this small comprehensive reference notebook.

Recommended Books

"EFFECTIVE COMMUNICATION ON THE JOB," (American Management Assn., \$5.50).

A guide to employee communication for supervisors and executives, giving specific and realistic ways of insuring better communication. This book tell show to increase operating efficiency by holding productive meetings and conferences, giving orders that get results, counseling on job performance.

"PLANNING AND DEVELOPING THE COMPANY ORGANIZATION STRUCTURE," (American Management Assn., \$4.75).

A study designed to help create a sound organization structure or modernize an existing one. Drawing on actual company experience, it describes and analyzes major organization problems arising during company growth. Also are given step-by-step processes of reorganization, including practical suggestions on gaining acceptance of the decision to reorganize.

"CONTROLS AND TECHNIQUES FOR BETTER MANAGEMENT," (American Management Assn., \$1.75).

In non-technical language, this publication discusses operations research and describes how it—and other management tools—can result in better decisions. Other papers report on company experience in setting up controls for company growth and for coordination of research and development.

"THE GILDED TORCH," by Iola Fuller (G. P. Putnam's Sons, \$4.00).

An exciting picture of an impor-

tant chapter in the history of the midwest section of the United States. A story of the expedition of La Salle, exploring the Mississippi and the surrounding country and the region which would some day be Chicago.

"MIGHTY STONEWALL," by Frank Vandiver (McGraw-Hill, 547 pages, \$6.50).

One of the best biographies of Jackson ever to be published. This is about the man that General Lee said, "Such an executive officer the sun never shone on. I have but to show him my design, and I know that if it can be done it will be done."

"THE MILITARY STAFF," by Col. J. D. Hittle, USMC (Military Service Publishing, 286 pages, \$3.75).

A modern study on the history and development of the general staffs of the armies of the United States, Great Britain, France, Germany and Russia. It is a penetrating study that traces the evolution of staffs from 2000 B.C. to the

present time and contains a complete bibliography. A thought-provoking comparison of the progress of staff organization in different countries.

"ELECTRONIC COMPUTERS," by T. E. Ivall (Philosophical Library, \$10.00).

A non-mathematical introduction to the mechanism and application of computers employing valves and transistors. Primarily written for technicians, engineers and students with a knowledge of electricity or electronics, but also suitable for business executives.

"TREATISE ON SURVEYING," by Middleton and Chadwick (Philosophical Library, \$20.00).

This two volume work has been many years a standard work on surveying and in this new edition it has been brought fully into line with modern practice and needs. Much of this work has been recast and re-written, each chapter being undertaken by a prominent expert in its particular field. Numerous maps, charts, drawings, photos.

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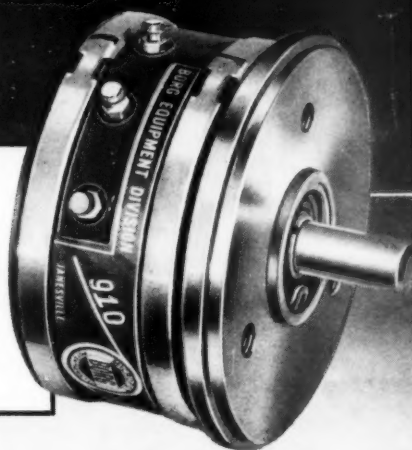
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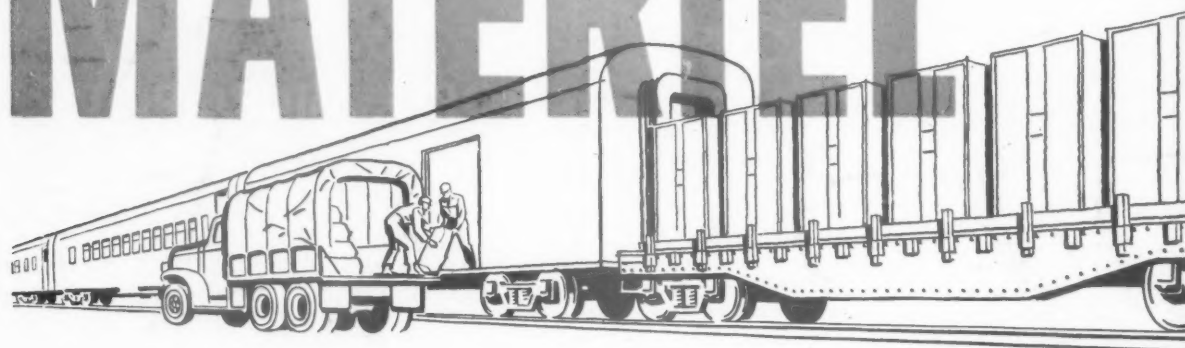


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